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**A GRAMMATICAL APPROACH TO TOPIC AND FOCUS:  
A SYNTACTIC ANALYSIS WITH PRELIMINARY EVIDENCE  
FROM LANGUAGE ACQUISITION**

**Committee:**

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Richard P. Meier, Supervisor

---

Lisa J. Green, Co-Supervisor

---

Stephen M. Wechsler

---

John T. Beavers

---

Nicholas M. Asher

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FROM LANGUAGE ACQUISITION**

**by**

**Heeyoung Lyu, B.A.; B.A.; M.A; M.A.**

**Dissertation**

Presented to the Faculty of the Graduate School of  
The University of Texas at Austin  
in Partial Fulfillment  
of the Requirements  
for the Degree of

**Doctor of Philosophy**

**The University of Texas at Austin  
August 2011**

이 박사학위논문을 나의 아버지 류홍락님께 바칩니다.

This dissertation is dedicated to my father, Hongrak Ryu.

## **Acknowledgements**

This dissertation would not have been possible without my advisor, Dr. Lisa J. Green. I have been amazingly fortunate to have an advisor who gave me the freedom to explore on my own and at the same time the guidance to recover when my steps faltered. Her comments are always extremely perceptive, helpful, and appropriate. I owe my deepest gratitude to my co-advisor, Dr. Richard P. Meier, who undertook to act as my co-advisor despite his many other academic and professional commitments. His knowledge and commitment to the highest standards inspired and motivated me. My committee members deserve a special note of praise. I wish to thank Dr. Stephen M. Wechsler, Dr. John T. Beavers, and Dr. Nicholas M. Asher for providing numerous hours of advice and critiques.

I am grateful to Dr. Tom Roeper for his comments and suggestions. I have benefitted greatly from his advice. I would like to thank Dr. Rajesh Bhatt for inspiring me to develop confidence in my abilities as a linguist, and for that I am truly grateful. It is a pleasure to thank Mr. Benjamin Rapstine for assisting me with the administrative tasks necessary for completing my doctoral program. The faculty and staff at The University of Texas at Austin are the most dedicated people, and I feel honored to have worked with them. Their guidance has served me well and I owe them my heartfelt appreciation. I am also indebted to my previous supervisor and mentor, Dr. Hyekyung Sung-Frear, for a lot of practical advice and moral support. I thank my colleagues in the Defense Language

Institute Foreign Language Center for their encouragement. My thanks must go also to Dr. Goanpyo Hong, Ms. Sukyung Kim, their son Sungbum Hong, my friend Miyoung Park, and her daughter Yoon Kim for their patience and support while helping me collect data. I would like to give special thanks to Emily Roehl for her editing this dissertation. Without her, I could not have met all the draft deadlines.

My graduate studies would not have been the same without the social and academic challenges and diversion provided by my friends Cholthicha Sudmuk, Gayatri Rao, Gwendolyn Hyslop, Kendra Lewis, and Robin Fletcher. I especially need to express my gratitude and deep appreciation to Cynthia Hansen, Jessica White Sustaita, Kate Shaw Points, and Taryne Hallet, whose friendship, hospitality, knowledge, and wisdom have supported, enlightened, and entertained me over the many years of our friendship. My enormous debt of gratitude can hardly be repaid to my friends Henrietta Shu-Fen Yang, Hyunmi Lee, Kyungbin Baik, Miyoung Park, and Yonchong Kim. Their support and care helped me overcome setbacks and stay focused on my graduate study. I greatly value their friendship and I deeply appreciate their belief in me. I am also grateful to my friends Ümran Günsel and Amel Farghaly for their encouragement and emotional support during the final revision of the draft. I offer my regards and blessings to all of those who supported me in any respect during the completion of this dissertation.

Most importantly, none of this would have been possible without the love and patience of my family – my father, Hongrak Ryu, my mother, Hyesook Soon, and my sisters, Kyunghye Ryu and Soojin Ryu. My family has been a constant source of love, concern, support, and strength all these years. Their support forged my desire to achieve

all that I could in life. I owe them everything and wish I could show them just how much I love and appreciate them.

**A GRAMMATICAL APPROACH TO TOPIC AND FOCUS:  
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Heeyoung Lyu, Ph.D.

The University of Texas at Austin, 2011

Supervisors: Lisa J. Green and Richard P. Meier

The goal of this dissertation is to argue on the basis of the minimalist framework that the topichood of sentence topics and contrastive focus result from derivational and structural differences in the left periphery and to provide acquisition data from child language to support this claim, showing data from Korean, a free word-order and pro-drop language in which topics and contrastive foci are realized morphologically. In Korean, topic phrases merge in the left periphery and contrastive focus phrases undergo scrambling, one of the shared properties of free word-order languages. It is consistent in fixed word-order languages such as Italian and Hungarian and a free word-order language like Korean that topics merge and contrastive foci move to the left. Topics precede contrastive foci: topics merge in TopP, a higher functional projection than FocP, to which focus phrases move.



In the process of language acquisition, the derivational and structural differences between topic phrases and contrastive focus phrases may have influences on the developmental order of grammar acquisition. In acquisition data from two-year-old Korean children, topics emerge earlier than contrastive foci, indicating that topic and contrastive focus are also acquisitionally different.

This study is the first attempt to examine the structural differences and the influence on language acquisition of morphologically derived topic phrases and contrastive focus phrases in acquisition data from a free word-order and pro-drop language. This study shows the structural consistency of topic and contrastive focus between a free word-order language and fixed word-order languages. The syntactic and acquisitional distinction of topic merge and contrastive focus movement is compatible with the semantic and pragmatic approaches to topic and focus. This study provides evidence of the syntactic differences between topic and contrastive focus without dependence on phonetic features; therefore, this study is a base for drawing a map of the left periphery of human languages.

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## Chapter 1: Introduction

The main objective of this dissertation is to argue that the topichood of sentence topics and contrastive foci result from structural differences in the left periphery and to provide acquisition data from child language to support this claim, showing data from Korean, a free word-order language. Topics and contrastive foci have structurally different properties, so different derivations are expected for sentence topic phrases and contrastive focus phrases. The left periphery is the edge of a clause above the Tense Phrase (TP) and includes the functional projections, such as Topic and Focus. Working within the minimalist framework (Chomsky 2001, 2004, 2007), I suggest that topic phrases merge<sup>1</sup> in the topic field of the left periphery, preceding contrastive foci, whereas contrastive focus phrases move to the focus field of the left periphery.

Topic phrases, especially sentence topics, are mainly sentence-initial and indicate what sentences are about (Chafe 1976, Chomsky 1977, Davison 1984, Erteschik-Shir 1993, Givón 1983, Gundel 1974, 1985, 1999, Kuno 1972, Prince 1981, Reinhart 1981, Strawson 1964, Vallduví 1992). A sentence topic phrase in the leftmost position has wider scope than the rest of the elements in a sentence. Contrastive focus is the focus that represents a subset of contextually given sets for which the predicate phrases can hold, and contrastive foci move to the specifier of a functional projection (É. Kiss 1998a).

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<sup>1</sup> In this dissertation, ‘merge’ is used as a shortened form of ‘merge, not move.’ I will explain the process of merging in detail later.

Topic and focus have been discussed mainly in the semantics and pragmatics literature, but they have also been important topics in the syntax literature since the left periphery was suggested by Rizzi (1997). Since Rizzi (1997, 2001, 2004a, 2004b), there have been several suggested structural analyses of the left periphery (e.g. Aboh 2004, Benincá and Poletto 2004, Lipták 2010). The goal has been to describe the left periphery in detail, assuming different functional projections for topic and focus, as well as for other projections in information structure. In the suggested structures, Force, the head of the highest projection in the left periphery which encodes the illocutionary force or clause type of the sentence, and topic projections, for instance, precede the focus projections:

(1) [<sub>ForceP</sub> Force [<sub>TopP</sub> Top [<sub>FocP</sub> Foc [<sub>TP</sub> ....

Syntactic approaches to topic and contrastive focus provide a cartography of functional projections for topic and contrastive focus in the left periphery, mainly based on fixed word-order languages such as Italian and Hungarian. In these languages, the difference in the positioning of topics and contrastive foci is represented overtly in sentences, and contrastive foci may undergo A'-movement as *wh*-movement. Free word-order languages, such as German, Hindi, Japanese, Korean, Russian, and many others are different from fixed-order languages, especially in movement phenomena: free word-order languages share the property of scrambling, in which words may scramble in sentences, resulting in various surface orders without a change in meaning (Erteschik-Shir 2007). On the other hand, free word-order languages and fixed word-order languages

share some properties, such as merging a phrase in the left periphery or left-dislocation, wherein a phrase occurs outside a clause boundary to the left and has a co-referring overt/covert pronoun in an argument position within the clause boundary. Merged phrases in the left periphery can be sentence topics in both free word-order languages and fixed word-order languages.

Scrambling may result in the ambiguity of sentences, since it changes the word order of sentences and different word orders may result from different derivations. Some free word-order languages such as Korean, Japanese, and Hindi have specific markers which suffix to topics or to the contrastive foci of sentences. In Korean, phrases may be scrambled or dropped, but the marker *–nun* suffixes to topic phrases and contrastive focus phrases, so topics and contrastive foci may be marked overtly in sentences. Analyzing Korean topics and contrastive foci will be a way to examine the structures of topic and contrastive focus in free word-order languages.

In Korean, topic and contrastive focus are realized morphologically with the marker *–nun*. *Nun*-marked phrases (*nun*-Ps)<sup>2</sup> may occupy sentence-initial positions or other positions, receiving topic readings or contrastive focus readings. Topic phrases primarily occupy the leftmost position of sentences, preceding contrastive foci (Benincá and Poletto 2004), and only sentence-initial *nun*-Ps receive topic readings. In other positions than the leftmost position, *nun*-Ps receive only contrastive focus readings. The

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<sup>2</sup> I will call *nun*-marked phrases *nun*-Ps from now on. *Un* is an allomorph of *nun*, which occurs after a consonant. *Nun* occurs after a vowel.



positional differences represent the structural differences of topic *nun*-Ps and contrastive focus *nun*-Ps.

The structurally different *nun*-Ps have contextually different roles. For diagnostic methods for topic *nun*-Ps and contrastive focus *nun*-Ps, I provide a short dialogue for each tested *nun*-P to show possible topichood or contrast. I set up context for topichood, starting the dialogue with a topic phrase, and context for contrastive focus, starting the dialogue with a contrastive element to the tested *nun*-P. I input a tested *nun*-P after a dialogue-setting expression. The next examples show clearly that only leftmost *nun*-Ps can receive topic readings.

(2) A: sagwa-ga edie is-ni, nu sagwa buass-ni

apple-NOM where is-Q, you apple saw-Q

‘Where are apples? Did you see apples?’

B: a. sagwa-nun John-i Mary-ege juese

apple-NUN John-NOM Mary-DAT gave

‘As for apples, John gave them to Mary.’

\*‘John gave apples to Mary (and pears to Bill).’

b. #John-i sagwa-nun Mary-ege juese

John-NOM apple-NUN Mary-DAT gave

‘John gave apples to Mary (and pears to Bill).’

Apples are the only topic in this context, and only (2a) can be the answer to A's question. The *nun*-P *sagwa-nun* in (2a) receives only a topic reading. The *nun*-P *sagwa-nun* in (2b) receives only contrastive focus readings, preceded by the subject *Johni*. In the following examples, only contrastive focus *nun*-Ps may be selected in answers.

- (3) A: *sagwa-wa be-ga edie is-ni*  
 apple-and pear-NOM where be-Q  
 'Where are apples and pears?'
- B: a. *John-i sagwa-nun Mary-ege juese*  
 John-NOM apple-NUN Mary-DAT gave  
 'John gave Mary apples (and Bill pears).'
- b. *sagwa-nun John-i Mary-ege juese*  
 apple-NUN John-NOM Mary-DAT gave  
 'John gave Mary apples (and Bill pears).'
- \*'As for apples, John gave Mary them.'

A's question is about apples and pears, and B chooses only apples, which are contrastive to pears. In each of (3a) and (3b), the *nun*-P *sagwa-nun* can receive only a contrastive focus reading. *Sagwa-nun* in (3b) cannot have a topic reading even in the leftmost position.

Topic *nun*-Ps are comparable to left-dislocated topics in German (Frey 2005), English (Quirk, Greenbaum, Leech, and Svartvik 1985, Frey 2005), and Italian (Benincá

and Poletto 2004), which merge in the left periphery and have resumptive pronouns in the argument positions, as shown in the examples in Chapter 2. Sentence-initial *nun*-Ps have overt/covert co-referring pronouns in argument positions along the lines of left-dislocated topics, which have resumptive pronouns. I argue that topic *nun*-Ps merge in the left periphery, assuming that the topic *nun*-Ps merge in TopP to check the topic feature [top(ic)]. In (4a), the *nun*-P *gu hakseng-un* is the only topic of the dialogue, and it cannot be interpreted as a contrastive focus. In (4b), the same answer from B is not appropriate because two students are focused contrastively from each other and the *nun*-P in B's answer receives only a topic reading. In the structure of B's answer in (4a), the *nun*-P is in TopP and there is a co-indexed *pro* in the embedded clause. Topic *nun*-Ps merge in TopP, and the topic feature [top] is checked in the Spec-head relation.

(4) a. A: utuke neo gu hakseng-ul ala?

How you that student-ACC know

‘How did you get to know that student?’

B: gu hakseng-un ne-ga cha-ro chi-go domangga-n saram-ul chajaneji

that student-NUN I-NOM car-by hit-and ran-that man-ACC found

[<sub>TopP</sub> gu haksengi-un]<sub>[top]</sub> [<sub>TP</sub> ne-ga [<sub>DP</sub>[<sub>ForceP</sub> *pro*<sub>i</sub> cha-ro chi-go domangga-n]  
saram-ul] chajaneji]]

‘As for the student, I found the man who had run him over with a car and had run away.’

\*‘The student, I found the man who had run him over with a car and had run away(, but I don’t know the other).’

b. A: doo hakseng joonge noogu-lul ala

two student among who-ACC know

‘Which student do you know between those two students?’

B: #gu hakseng-un ne-ga cha-ro chi-go domangga-n saram-ul chajaneji

Pro-drop languages like Korean and Japanese avoid redundancy and omit a pronoun if the meaning is supplied by another argument in the same sentence or by discourse features. It is common to omit an argument if there is a co-indexed phrase preceding the argument. The co-indexed *pro* is an equivalent of a resumptive pronoun, which is co-indexed with a sentence-initial left-dislocated topic in Italian, German, and English. I argue that there is a *pro* in an argument position in Korean, and the *pro* is co-indexed with the *nun*-P, which receives a topic reading, following Hoji (1985) and Saito (1985).

*Nun*-Ps may scramble leftward, showing island effects. Scrambled *nun*-Ps receive only contrastive focus readings. The claim in this study is that the contrastive focus *nun*-Ps scramble leftward, assuming that they eventually land in the left periphery to check a focus operator feature in FocP by the contrastive focus operator movement. The scrambled *nun*-Ps retain their phonetic features at the landing sites, and the *nun*-Ps leave their copies on the way to the FocP.

(5) a. A: Mary-nun amoodo sinroiha-ji ana

Mary-NUN anyone trust not

‘Mary trusts no one.’

B: jasin-ui chingu-nun John-i Mary-ga sinroihandaga sengakhe

self’s friend-NUN John-NOM Mary-NOM trust-that think

[FocP jasin<sub>i</sub>/\*j-ui chingu-nun<sub>[foc, phon]</sub>] [TP John<sub>i</sub>-i jasin<sub>i</sub>/\*j-ui chingu-nun<sub>[foc, phon]</sub>]

[ForceP Mary<sub>j</sub>-ga jasin<sub>i</sub>/\*j-ui chingu-nun<sub>[foc, phon]</sub> sinroihandaga] sengakhe]

\*‘As for John’s friend, he thinks Mary trusts her.’

‘John thinks that Mary trusts his friend(, but he doesn’t know about the others.)’

b. A: mary-ga noogoo-lul sinroihani?

Mary-NOM who-ACC trust

‘Who does Mary trust?’

B: #jasin-ui chingu-nun John-i Mary-ga sinroihandaga sengakhe

In (5a), B's answer is contrasting *jasinwi chingu* 'his own friend,' pointing out that there is one person that Mary may trust, though A says that Mary trusts nobody. The anaphoric phrase cannot be the topic because the topic of the dialogue (5a) is Mary. The same answer of B is inappropriate in (5b), in which the person who Mary trusts is the topic. In the structure of B's answer in (5a), the *nun*-P *jashinui chingu-nun* moves out of the embedded clause to the right of the subject *Johni* of the root clause, and the *nun*-P moves to FocP to check the contrastive focus feature [foc(us)] in FocP. The anaphoric *nun*-P must be reconstructed in the intermediate position to be bound by the subject *Johni*, as illustrated with indices.

Contrastive focus movement is observed in some fixed word-order languages, such as Hungarian (Horvath 1981, 1986, É. Kiss 1987), and contrastive foci may undergo A'-movement. In free word-order languages, however, words do not show obvious A'-movement, and contrastive foci in some languages have strong accents on them, so the relation between the informational structure and prosody are the main subjects discussed in approaches to contrastive focus in free word-order languages. However, phonological factors cannot always be an indication of contrastive focus status because many languages do not have specific focal accents. In particular, voices from synthesizers often do not have prosody, but the meanings are comprehended. This study focuses on the positions of contrastive focus *nun*-Ps, approaching contrastive focus syntactically in Korean.

The derivational and structural differences between topic *nun*-Ps and contrastive focus *nun*-Ps have parallels in semantics and pragmatics, in which topic and focus are

considered to have different informational structures. Multiple *nun*-Ps provide evidence of the structural and discoursal difference between topic and contrastive foci.

(6) a. A: Kim sunsengnim-i unu hakseng-ege unu cheg-ul juesu

Kim teacher-NOM which student-to which book-ACC gave

‘Which book did Ms. Kim give to which student?’

B: Kim sunsengnim-nun yuksa cheg-un John-ege-nun juesu.

Kim teacher-NUN history book-NUN John-to-NUN gave

[<sub>TopP</sub> Kim sunsengnim-nun<sub>[top]</sub> [<sub>FocP</sub> yuksa cheg-un<sub>[foc, phon]</sub> [<sub>FocP</sub> John-ege-nun<sub>[foc, phon]</sub>

[<sub>TP</sub> *pro* yuksa cheg-un<sub>[foc, phon]</sub> John-ege-nun<sub>[foc, phon]</sub> cheg-un<sub>[foc, phon]</sub> juesda]]]]

‘As for Ms. Kim, she gave a history book to John (not to others) (and a novel to Bill...)’

b. A: unu sunsengnim-i unu hakseng-ege unu cheg-ul juesu

which teacher-NOM which student-to which book-ACC gave

‘Which teacher gave which book to which student?’

c. A: unu sunsengnim-i unu hakseng-ege yuksa cheg-ul juesu

which teacher-NOM which student-to history book-ACC gave

‘Which teacher gave the history book to which student?’

B: #Kim sunsengnim-nun yuksa cheg-un John-ege-nun juesu.

d. A: unu sunsengnim-i John-ege unu cheg-ul juesu

which teacher-NOM John-to which book-ACC gave

‘Which teacher gave which book to John?’

B: #Kim sunsengnim-nun yuksa cheg-un John-ege-nun juesu.

In A’s question in (6a), there are a set of students and a set of books, and A is asking which book among the books Ms. Kim chose for which student among the students. Ms. Kim is the topic of (6a), and the B’s answer with multiple *nun*-Ps is appropriate with the first *nun*-P *Kim sunsengnim-un* receiving a topic reading. The other *nun*-Ps receive contrastive focus readings. None of the *which*-phrases of (6b) is the topic of the dialogue in which each *wh*-phrase has a set including the options for B’s choice. The topic in (6c) is the history book, and (6d)’s topic is John. B’s answer is the same in each dialogue, and the answer is appropriate only in (6a) that the first *nun*-P of B’s answer is the topic.

It is a consistent syntactic phenomenon in many languages that sentence-initial topics are followed by contrastive foci. Multiple *nun*-Ps show that topics precede contrastive foci, supporting the claim that the left periphery includes both topic projections and focus projections, and that the topic is projected above the focus projection. The consistency of the structural properties of topic and contrastive focus in free word-order languages and fixed word-order languages shown in this research will be a strong source for a cartography of the left periphery, which all languages share in the sentence structure.



Assuming that derivational and structural differences influence language acquisition, I will review two-year-old children's acquisition data, which were recorded over the course of one year, and discuss the acquisition order of topic *nun*-Ps and focus *nun*-Ps. This research will be the first approach examining the structural differences of morphologically derived topic phrases and contrastive focus phrases from the acquisition data of a free word-order and *pro*-drop language. The acquisitional order of topic *nun*-Ps and contrastive focus *nun*-Ps in the stage of early language acquisition will support the derivational and structural difference between topic and contrastive focus.

The properties of the language acquisition device (LAD), which provides human beings with a set of procedures to make them able to acquire a grammar of their native languages, must be simple enough to function for any language, and this is the assumption on which the Minimalist Program relies (Chomsky 1995b). Therefore, this research, which provides some evidence of the structural similarity between fixed word-order languages and free word-order languages, may be relevant for work on the properties of the LAD in that it could take steps toward showing that simplicity is preferred in the acquisition of a language.

This research is organized in the following way: in Chapter 2, I will present background information on topic and focus. I will introduce phonological characteristics of topic and contrastive focus and the semantic approaches. Discussing syntactic approaches to topic and contrastive focus, I will introduce the current trends in the approaches to the structure of topic and contrastive focus. Chapter 3 is the theoretical framework for this dissertation. I provide an overview of current studies of the

Minimalist Program. In order to determine whether a phrase is merged or moved into its position, diagnostic methods for movement are suggested. Chapter 4 is a discussion of merged topics. I will test the topic phrases with the diagnostic methods for movement to show that topics do not move but merge. I will also suggest a structure for topic, arguing that topic phrases merge in TopP. Chapter 5 is a discussion of contrastive focus movement. Diagnostics are used to show that contrastive focus phrases scramble to the left. These phrases are argued to move subsequently to the FocP. The structural difference between topic phrases and contrastive focus phrases will be discussed in Chapter 6, using multiple *nun*-P structures. I discuss the order of multiple *nun*-Ps in a sentence and their readings and show that topic *nun*-Ps precede contrastive focus *nun*-Ps. I will give some contextual evidence for the difference between *nun*-Ps in different positions. In Chapter 7, I will analyze acquisition data from Korean children in order to discuss developmental differences between topic phrases and contrastive focus phrases in early language acquisition. I will compare the order in which topics, contrastive foci, and other grammatically marked phrases are observed. Chapter 8 is the conclusion of this dissertation, in which the major points are summarized and further directions are suggested.

## **Chapter 2: Approaches to Parallels between Topic and Focus**

In this chapter, I will discuss approaches to topic and focus, particularly sentence topic and contrastive focus. Topic and contrastive focus have been addressed by many semanticists and pragmaticians and more recently by syntacticians. Topic and contrastive focus are discussed from the perspectives of phonological and semantic properties and then from the angle of syntax. The definitions of topic and contrastive focus in the literature vary, but this chapter shows that topic and contrastive focus have specific properties according to their roles in sentences.

### **2.1 Properties of Topic**

In the representation of the topic-focus structure, the topic is what the sentence is about (Chafe 1976, Chomsky 1977, Davison 1984, Erteschik-Shir 1993, Givón 1983, Gundel 1974, 1985, 1999, Kuno 1972, Prince 1981, Reinhart 1981, Strawson 1964, Vallduví 1992). In the pragmatics literature on topic, “theme,” the first part of a sentence, and “rheme,” the rest of the sentence, are adopted as the terminology for topic and focus (Mathesius 1939, 1961, and Halliday 1967, 1977). The theme is what is being talked about (Halliday 1967) and put first because the speaker assumes the addressee is conscious of the theme (Chafe 1976, Contreras 1976). Strawson (1964) suggests that the topic is of current interest or concern, so it is what the sentence is about. Reinhart (1981) argues that with topic phrases, speakers and hearers organize or classify the information

in communication, which means that sentence topics are indexes for constructing the context set.

In some languages, topic phrases can be dropped out of sentences if they are recoverable from the discourse (Huang 1984). This phenomenon is called ‘topic drop,’ and Chinese and German are topic drop languages (Erteschik-Shir 2007:23-4). The following sentences are Chinese examples:

(7) a. *e* lai-le.

come-LE

“[He] came.”

b. Lisi hen xihuan *e*.

Lisi very like

“Lisi likes [him] very much.”

c. Zhangsan shuo [*e* bu renshi Lisi].

Zhangsan say not know Lisi

“Zhangsan said that [he] did not know Lisi.”

d. Zhangsan shuo [Lisi bu renshi *e*].

Zhangsan say Lisi not know

“Zhangsan said that Lisi did not know [him].” (Huang 1984: 537)

In these examples, the null pronoun *e* represents the omitted topic phrase that is recoverable from the discourse. The null pronouns in (7a), (7b), and (7c) refer to a

referent in the discourse that is not in the sentences. The null pronoun in (7d) may refer to the matrix subject 'Zhangsan' or a discourse referent.

In a sentence, the scopal relations depend on topic assignment (Erteschik-Shir 2007). The topic has wider scope than other elements because the predicate is evaluated with regard to the topic. The following sentence is ambiguous without an element to the left:

(8) Three students chose two subjects.

This sentence can be interpreted in three ways: all three students chose two subjects, each of three students chose two subjects, or there are two subjects and each subject was chosen by three students. Erteschik-Shir explains that the ambiguity results from different topic assignment. If the subject 'three students' is assigned topic contextually, the first two interpretations are attained, and if the object 'two subjects' is assigned topic contextually, the third interpretation is attained. With a topic phrase in the leftmost position, the following sentence is not ambiguous:

(9) On the test, three students chose two subjects.

In this example, *on the test* is the topic of the sentence and it means that the test is the specified stage on which the event of three students choosing two subjects took place.<sup>3</sup> Neither the subject nor the object is scoped with the topic phrases, and the clause on the right of the topic is predicated of the topic.

In summary, the topic is what the sentence is about. In some languages like Chinese, discourse-recoverable topic phrases may be dropped out of the sentence. Scopal relations depend on topic assignment. In the next section, I will discuss the definition of focus and contrastive focus.

## **2.2 Properties of Focus and Focus Types**

The focus of a sentence denotes the information that the speaker believes the speaker and the hearer do not share (Jackendoff 1972) and that the speaker intends to draw the hearer's attention to (Erteschik-Shir 1986, 2007). If a speaker is trying to talk about new information that is not able to be recovered from the discourse, she presents it focused (Halliday 1967). Here, new information is the information that may not have been used in the current discourse (Prince 1981). Focus has primary stress in many languages. Jackendoff (1972) argues that the focus of a sentence has the highest stress in the sentence. A diagnostic for focus is the question-answer pair test (Rochemont and Culicover 1990, Rochemont 1998).

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<sup>3</sup> 'On the test' in this sentence may be called an 'overt stage topic' which 'specifies the location with respect to which the sentence is to be evaluated.' Erteschik-Shir (2007: 17)

(10) a. A: What are you drawing?

B: I am drawing the SEAL<sup>4</sup>.

b. A: Who brought you here?

B: JOHN did.

The phrases that fulfill the *wh*-words are foci in this diagnostic. In (10a), *the seal* corresponds to *what*, and it is the focus of B's answer. In (10b), *John* is the focus that corresponds to *who*.

Foci can be contrastive, and contrastive focus is also called identificational focus, narrow focus, exhaustive focus, or exclusive focus. Non-contrastive focus is also known as informational focus or presentational focus (Erteschik-Shir 2007). Mentioning that identificational focus is also referred to as contrastive focus, É. Kiss (1998a) distinguishes identificational focus from informational focus, arguing that identificational focus expresses exhaustive and contrastive identification, and informational focus conveys new information and involves no movement. She argues that an identificational focus stands for the exhaustive subset of a set in which elements are given contextually or situationally.

The following examples show the difference between informational focus in (11a) and contrastive focus in (11b):

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<sup>4</sup> The capitals are used for focused phrases carrying focal accents in this dissertation.

(11) Q: What did you buy at the shop?

a. A: I bought EVERYTHING they had.

b. A: I bought ONLY SNACKS.

(11a) delivers new information, and the focused phrase *everything* does not have potential alternatives that may be substituted with it. *Everything* in (11a) is an informational focus. (11b) presupposes there were other items that were available to buy and that the listener knows, but *only snacks* were selected. The focused phrase *only snacks* is contrastive.

Discussing the definition of focus, Rooth (1985) employs ‘p-sets,’ the sets of alternatives in the discourse. He argues that the semantic value of a focus phrase is a p-set, ‘the set of propositions obtainable from the ordinary semantic value by making a substitution in the position corresponding to the focused phrase’ (Rooth 1992:76).

(12) Q: Which color did you choose?

A: I chose YELLOW.

In this example, the question indicates there is an alternative set of colors that can be substituted for *yellow*. Both Rooth’s definition of focus and É. Kiss’s definition of contrastive focus place emphasis on the sets of alternatives, and the alternatives may be substituted for the contrastive focus.



Guéron (1980) observes that a focus phrase *in situ* with the focal accent may be contrastive or non-contrastive, but a subject (or a moved phrase) can only be contrastive.

(13) a. John loves MARY.

b. JOHN loves Mary.

According to Guéron, *MARY* in (13a) can be contrastive or not, but *JOHN* in (13b) can only be contrastive. She suggests that contrastive focus may have syntactic effects but informational focus may not. É. Kiss argues that contrastive focus may have scope, whereas informational focus may not. Contrastive focus moves to the specifier of a functional projection, but informational focus may stay *in situ*.

Considering the contrast that focus may convey, Chafe (1976) claims that there should be a set of possible candidates in order to contrast an element in context. Dik et al. (1981) propose different types of contrastive focus, as in (14a) to (14d), and argue that contrastive focus often presupposes alternatives. Choi (1999) adds ‘parallel focus’ to the list of contrastive focus types proposed by Dik et al., as in (14e).

(14) Contrastive focus types:

a. Selecting focus:

A: What did he drink at the bar, beer or wine?

B: He drank BEER.

b. Restricting focus:

A: She took apples and oranges for making pies.

B: No, she only took APPLES.

c. Expanding focus:

A: We have a bottle of wine.

B: We also have BEER. Let's ask Frank to join us.

d. Replacing focus:

A: Mary traveled in Europe.

B: No, she traveled in INDIA (not in EUROPE).

e. Parallel focus:

Jason likes CARTOONS, but Mary likes DOCUMENTARIES.

In (14a), the speaker B selects the focused phrase *beer* among *beer* and *wine*. In (14b), B restricts the ingredients for making pies to 'apples;' on the other hand, B expands the focus, including *beer* in (14c). The place that Mary traveled is replaced with *India* in (14d). In (14e), *cartoons* and *documentaries* are parallel and contrastive to each other. The focused phrases are contrastive foci, and all of them have alternative sets. As Choi points out, however, they are not equally contrastive, even with alternatives. Choi argues that contrastive focus must be prominent, and the alternative sets make the focused phrases prominent.

The focus of a sentence is the information that the speaker wants to share with the hearer that cannot be recovered from the current discourse. Focus can be contrastive or

informational. Contrastive focus expresses exhaustive and contrastive identification, presupposing a set of alternatives that can be substituted with the contrastive focus phrase. Informational focus is non-contrastive focus that conveys new information and involves no movement.

### 2.3 Phonological Characteristics of Topic and Contrastive Focus

Topics are generally pronounced without specific accents or intonation, but contrastive foci have specific intonation in many languages. Adopting Jackendoff's (1972) A-accent (fall) and B-accent (fall-rise), Büring (1999, 2003) shows that informational foci have A-accent and contrastive foci (what he calls 'contrastive topics') have B-accent.

(15) a. A: Well, what about FRED? What did HE eat?

B: FRED ate the BEANS.

B-accent      A-accent

b. A: Well, what about the BEANS? Who ate THEM?

B: FRED ate the BEANS.

A-accent      B-accent      (Adapted from Jackendoff 1972, Büring 2003)

According to Büring, *FRED* with a B-accent is the contrastive focus of B's answer and *BEANS* with an A-accent is the focus in (15a), whereas *FRED* with an A-accent is the focus and *BEANS* with a B-accent the contrastive focus in (15b).

More specifically, Erteschik-Shir (1997, 2007) gives the following examples in order to show intonation marking on focus, adopting the analysis in Pierrehumbert and Hirschberg (1990) and using the notation of intonation marking in Pierrehumbert (1980).<sup>5</sup> H stands for high tones and L for low tones, \* for pitch accent, and % for boundary tone.

(16) Q: What about the beans? Who ate them?

A: Fred<sub>foc</sub> ate [{[the beans]<sub>foc</sub>;[other foods]}<sub>top</sub>]<sub>top</sub>

H\*      L      L+H\*                      LH%

Pierrehumbert and Hirschberg suggest that the question evokes a set of foods including the beans. With the LH tones, ‘the beans’ becomes the subordinate focus. The food set is available, so LH tones are assigned to the beans. LH indicates contrastive foci and H indicates an informational focus.

Contrastive foci and informational foci are marked phonologically in many languages, and it is generally accepted that there is a correlation of focus assignment and prosodic prominence. However, some languages like Finnish and Norwegian do not show prosodic prominence distinguishing contrastive foci from informational foci. Vallduví and Vilkuna (1998) observe that both contrastive focus and informational focus have a single high tone accent in Finnish, and they are distinct syntactically, not prosodically.

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<sup>5</sup> Pierrehumbert and Hirschberg (1990) sketch a compositional account of the meanings of contours. The H\* accent marks focused information which is to be added to the mutual beliefs; the L\* accent marks information which is salient but not proposed as an addition. The L+H accents are used to mark information which is selected from a small domain of alternatives: the L+H\* marks an ‘add’ and the L\*+H marks a ‘non-add’. The H+L is used to identify a relationship of the information to the mutually believed information. The boundary tones mark the discourse status of the phrase as a whole.

Norwegian does not have the intonational distinction between topic and focus (Fretheim 1987, 1992a, 1992b, 2001).

(17) FRED spiste BØNNENE

Fred    ate    the beans

‘Fred ate the beans.’

(Gundel and Fretheim 2004: 183)

In this example, both the subject and the object are prosodically prominent, and the subject and the object can be either topic or focus, resulting in ambiguity. Topic and focus are assigned to the subject and the object pragmatically, not prosodically, in Norwegian.

In Hungarian as in Finish, topic and focus are encoded syntactically. Focus phrases occur in positions immediately preceding verbs, and topic phrases occur sentence-initially in Hungarian (É. Kiss 1995). In some languages like Wambon, Japanese, and Korean, topic and contrastive focus are marked morphologically. Wambon (e.g. Dik 1997) has the morphological marker *-nde* for foci. Japanese has a marker *-wa* and Korean has a marker *-nun* which attaches to topic phrases and contrastive focus phrases. According to Choi (1993:3), ‘Korean does not appear to have any default sentential intonation pattern so that no element of the sentence, neither verb nor object or adjunct, bears prosodic prominence in the default, wide-focus, neutral-context sentences.’ Korean *-nun* marked phrases (*nun*-P) without prosodic prominence encode topic or contrastive foci:

(18) A: Mary-ga ne cheg-ul takja uie namgyudwus-ji

Mary-NOM my book-ACC table on left-right

‘Mary left my book on the table, right?’

B: a. *guui cheg-un* Mary-ga takja uie noasu

his book-NUN Mary-NOM table on put

b. Mary-ga *guui cheg-un* takja uie noasu

Mary-NOM his book-NUN table on put

c. ?Mary-ga takja uie *guui cheg-un* noasu<sup>6</sup>

Mary-NOM table on his book-NUN put

‘Mary put his book on the table (and nothing else).’<sup>7</sup>

Because A thinks that Mary put A’s book on the table, the *nun*-P *guui cheg-un* ‘his book’ in B’s answers is contrastive. *Nun*-Ps in (18a), (18b), and (18c) are contrastive foci, but the *nun*-P in (18a) may also be a topic in a different context:

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<sup>6</sup> Without a strong accent on the marker *-nun*, this sentence is not natural. One of four Korean native speakers said that the sentence is not acceptable without the strong accent on *-nun*. Therefore, I added one question mark to this sentence.

<sup>7</sup> The grammaticality of all the Korean data (except children’s data in Ch.7) in this dissertation was judged by at least three Korean native speakers. If less than 30% of the informants judged a given sentence unacceptable, I gave one question mark; if more than 30% and less than 50% judged a sentence unacceptable, I gave two question marks. If more than 50% of the informants judged a sentence unacceptable, I added \* to the sentence. All the informants are instructors who are teaching Korean in a college.

(19) A: *guui cheg udi issu*

his book where is

‘Where is his book?’

B: a. *guui cheg-un Mary-ga takja uie noasu*

his book-NUN Mary-NOM table on put

‘As for his book, Mary put it on the table.’

b. #*Mary-ga takja uie guui cheg-un noasu*

c. # *Mary-ga guui cheg-un takja uie noasu*

The *nun*-P *guui cheg-un* ‘his book’ is the topic of the dialogue of (19). With the *nun*-P in the leftmost position, (19a) can be the answer of A’s question. The *nun*-Ps in (19b) and (19c) are preceded by other constituents and the *nun*-Ps cannot be the topic.

Usually, an accent is put on the marker *-nun* of a *nun*-P in a base position. If a strong accent is put only on the marker *-nun*, the *nun*-P receives an exhaustive reading.

(20) a. *Mary-ga takja uie gu cheg-UN noasda*

Mary-NOM table on that book-NUN put

b. *Mary-ga gu cheg-UN takja uie noasda*

Mary-NOM that book-NUN table on put

c. *gu cheg-UN Mary-ga takja uie noasda*

the book-NUN Mary-NOM table on put

‘Mary put the book (and nothing else) on the table.’

However, not only *–nun*, but also other markers (such as *–ul* and *–ga*), which have strong accents, indicate exclusive readings:

(21) a. Mary-ga takja uie *gu cheg-UL* noasda

Mary-NOM table on that book-ACC put

b. Mary-ga *gu cheg-UL* takja uie noasda

Mary-NOM that book-ACC table on put

c. *gu cheg-UL* Mary-ga takja uie noasda

the book-ACC Mary-NOM table on put

‘Mary put the book (and nothing else) on the table,’

In (21a), (21b), and (21c), the object *gu cheg* has an object marker *–ul*, on which a strong accent is placed. The *ul*-marked phrases also indicate exclusive readings. A subject marker *–ga* with a strong accent also yields an exclusive reading:

(22) a. Mary-GA *gu cheg-UL* takja uie noasda

Mary-NOM that book-ACC table on put

b. *gu cheg-UL* Mary-GA takja uie noasda

the book-ACC Mary-NOM table on put

‘Mary (and no one else) put the book on the table,’



Strong accents on morphological markers in Korean result in exhaustive readings of phrases, which means that morphologically marked phrases are encoded as contrastive foci if strong accents are placed on them. Also, *nun*-Ps in base positions usually receive strong accents on *-nun* or on the whole phrase, and thereby, they receive contrastive readings. However, topic and contrastive foci are encoded syntactically since the assignment of topic and contrastive focus depends on sentence internal positions.

Topics do not have specific prosodic marking, but contrastive foci have low-high tones in English, and informational foci have high tones in many languages. In some languages, topic and focus are encoded morphologically and syntactically, without prosodic prominence.

## **2.4 Semantic Approaches to Topic and Contrastive Focus**

For the last two decades, especially in the semantics literature, ‘contrast’ has been prominent in discussions of topic and focus. Contrast ‘requires a discursively available contrast set’ (Erteschik-Shir 2007: 9). A contrastive phrase should have a set in which the phrase can be compared with other elements in the set. Under Rooth’s (1985) definition of focus as introduced in 2.2, which has an alternative set whose elements can be substituted with the focused phrase, contrastive phrases are contrastive foci. Horn (1981) and Vallduví (1992) also argue that contrast is derived from the information status of focus.

Contrastive foci are distinct from informational foci: contrastive foci involve movement and scope, and morphologically marked focus phrases may be contrastive, as in Wambon, Korean, and Japanese, whereas informational foci neither move nor have scope. Contrastive foci may have topichood (Dik 1997). Because of these different properties of contrastive focus, topic, contrastive focus, and informational focus have been discussed independently of each other in recent literature (Büring 2003, von Stechow 1994, Portner and Yabushita 1998, Roberts 1996, McNally 1997). In these approaches, it is presupposed that a topic reading, a contrastive focus reading, and an informational focus reading result from different semantic and logical calculations.

For Büring (1999), topics are a part of the non-focus, and non-contrastive sentence elements that are not part of the focus are background. Büring (1999, 2003) uses the term ‘contrastive topic’ for a constituent marked by Jackendoff’s (1972) B-accent (fall-rise pitch accent). He distinguishes the contrastive topic from ‘topic,’ which is a more abstract notion that may not be marked by intonation in a given sentence.<sup>8</sup> Following van Kuppevelt (1991, 1996) and Roberts (1996), Büring (1999, 2003) suggests discourse trees that consist of questions, sub-questions, and answers. An utterance containing a contrastive topic is a sub-question in the discourse. He suggests the function  $[[ \ ] ]^{\text{CT}}$  that applies to a declarative sentence yields a contrastive topic value. His CT(contrastive topic)-value formation includes two steps: in step 1, the focus is replaced with a *wh*-word which is put in front, and in step 2, the contrastive topic is replaced with

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<sup>8</sup> His term ‘contrastive topic’ corresponds to contrastive focus in this dissertation under Rooth’s (1985) definition of focus.

some alternative to it and a set of questions from the result of step 1 is formed. For example, contrastive topic values are formed in the following way:

(23)  $FRED_{CT}$  ate the  $BEANS_F$ .

a. CT-value formation:

step 1: What did Fred eat?

step 2: What did Fred eat?

What did Mary eat?

What did ... eat?

b.  $[[FRED_{CT} \text{ ate the } BEANS_F.]]^{CT} = \{ \{x \text{ ate } y \mid y \in D_e\} \mid x \in D_e\}$

(Büring 2003: 519)

The set of questions listed by ‘step 2’ in (23a) is the output of CT-value formation. The question set is the set of question meanings in (23b), the CT-value of  $FRED_{CT}$  ate the  $BEANS_F$ . Büring suggests a theory of contrastive topic interpretation, presupposing that there is more than one possible topic in discourse, and contrastive topic is picked out among the possible topics.

In order to explain distinct properties of contrastive focus, von Stechow (1994) and Portner and Yabushita (1998) suggest that contrastive foci with topichood are focused topics. Von Stechow proposes that contrastive readings result from contrast operators and anaphoric variables that are adjoined to focus phrases. Anaphoric variables result in topichood. Due to the contrast operators, some set of propositions is available to topic

phrases. In a similar way, Portner and Yabushita suggest that contrastive foci with topichood are available where a phrase is connected with a focus operator inside the topic, where focus phrases are included in topic phrases. Reinhart (1982) and Tomlin (1995) also argue that topic phrases may be contrastive like focus phrases.

In the languages in which topic and focus are encoded morphologically, focus marked phrases may be contrastive foci, and the contrastive foci may have topichood in a sentence. Dik (1997) picks some sentences from Vries' (1985) Wambon examples to show contrastive foci with topichood. Wambon has a focus marker *-nde* that marks focus phrases and question words. *-Nde*-marked phrases may be contrastive:

(24) a. A: Mbitemop ndune ande-tbo

Bitemop sago eat-3sg:past:final

“Bitemop ate sago.”

B: Woyo, nekheve ndu-nde e-nogma-tbo

No he sago-Foc neg-eat-3sg:past:final

“No, he didn’t eat SAGO,

nekheve ande-nde ande-tbo

he banana-Foc eat-3sg:past:final

he ate BANANAS.”

b. A: Nombone ndu-ngup ande-ngup?

This sago-and banana-and

“What about this sago and bananas?”

B: Wembane ndu-nde takhima-tbo

Wemba sago-Foc buy-3sg:past:final

“Wemba bought the SAGO,

Karolule ande-nde takhima-tbo

Karolus bananas-Foc buy-3sg:past:final

Karolus bought the BANANAS.” (Dik 1997: 336)

In (24a), *-nde*-marked phrases are contrastive foci, and *ndu* ‘sago’ and *ande* ‘banana’ are contrasted with each other. In (24b), *ndu* and *ande* are contrasted with each other because they were bought by different people. Dik argues that they also have topichood because the rest of the elements of each sentence describe *ndu* and *ande*. He also argues that *ndu* and *ande* are defined as the topics contextually, and these phrases must be topic as well as foci.

Whereas *-nde* in Wambon marks only foci, Kuno (1973) observes that there are two different uses of the Japanese marker *-wa*: the theme of a sentence and contrasts.

Thematic *wa*-marked phrases are not contrastive:

(25) a. *wa* for the theme of a sentence: “Speaking of ..., talking about ...”

Example:

John wa gakusei desu.

student is

‘Speaking of John, he is a student.’

b. *wa* for contrasts: “X ..., but ..., as for X ...”

Example:

Ame wa hutte imasu ga ...

rain falling is but

‘It is raining, but ...’

(Kuno 1973, p38)

Kuno refers to the *wa* for the theme of a sentence as ‘thematic *wa*’ and to the *wa* for contrasts as ‘contrastive *wa*.’ He says that only a sentence initial *wa*-marked phrase can be interpreted as a thematic topic, and *wa*-marked phrases are contrastive in other positions of a sentence. Japanese *wa* and Korean *nun* have been discussed as parallels because of the linguistic similarities of the two markers. As illustrated in (18) and (19), *nun*-Ps may receive topic readings or contrastive readings, but only a *nun*-P in the leftmost position may receive a topic reading. If a *nun*-P is to the right of the subject or in a base position, it receives only a contrastive reading.

Japanese and Korean are not the only languages that have a marker for topic and focus; Hindi also has *-to*, which is similar to *-wa* and *-nun*. The following examples adapted from Han (1998:5) show that these markers indicate that phrases receive a topic reading or a contrastive reading.

(26) Hindi

a. Ram-ne-to seb khaa li-yaa

Ram-<sub>ERG-TO</sub> apple ate

‘Speaking of Ram, he ate the apple.’

‘Ram ate the apple, (Abu ate the banana, and Sita ate the strawberry).’

b. Ram-ne seb-to khaa li-yaa

Ram-<sub>ERG</sub> apple-<sub>TO</sub> ate

‘Ram ate the apple, (but not other fruits).’

(26a) receives a topic reading or a contrastive reading, and (26b) receives a contrastive reading only. In the examples from Japanese, Korean, and Hindi, the phrases marked with specific markers behave structurally similarly: the phrases that receive topic readings are sentence-initial, and the phrases receive contrastive readings in other positions.

It is common to treat topic, which is not contrastive, and contrastive focus separately. Since the same morphological markers may attach to topics or contrastive foci in some languages like Japanese, Korean, and Hindi, however, there have been some attempts at a unified analysis of the topic and contrastive focus (Shibatani 1990, Fiengo and McClure 2002, Heycock 2008). In particular, Vallduví and Vilkuna (1998) argue that in much discussion of focus, two different concepts are conflated and confused: the notion of focus and rheme and an operator-like element dealing with alternative sets. They refer to such operator constructions as *kontrast*, and they propose that if *kontrast* is

associated with thematicity, it results in contrastive topics, and if *kontrast* is associated with rhematicity, it results in contrastive focus.

Saito (2010) also attempts a unified analysis of *wa*, suggesting [arg(ument)], which yields the interpretation of an element as a variable, and the [top(ic)] feature on scrambled phrases. He assumes that the [top] feature can be retained and licensed at any position in a chain. [top] yields contrastive readings at any position, but a topic reading is obtained only if [top] is retained at Spec, Pred: [top] yields a topic reading or a contrastive focus reading, which is different from topic features in syntactic approaches. Proposing the derivation of topic PP phrases, he argues that as a result of scrambling a *wa*-phrase, [arg] is copied at the landing site and it is deleted after interacting with higher functional heads. Scrambling is semantically vacuous, but it has semantic effects because of the feature interaction. Furthermore, he argues that scrambled phrases may have [top], which is the source of discourse effects.

(27) Teruabibu-e-wa, [Hanako-wa (kyonen) t<sub>i</sub> itta]

Tel Aviv -to-TOP                      -TOP last year      went

- a. ‘Speaking of Tel Aviv, Hanako went there, but I don’t know about other people.’ (Tel Aviv – *thematic*, Hanako – *contrastive*)
- b. ‘Speaking of Hanako, she went to Tel Aviv, but I don’t know about other places.’ (Tel Aviv – *contrastive*, Hanako – *thematic*)
- c. ‘Speaking of Tel Aviv and speaking of Hanako, she went there.’  
(Tel Aviv – *thematic*, Hanako – *thematic*)



- d. ‘Hanako went to Tel Aviv, but I don’t know about other places and other people.’ (Tel Aviv – *contrastive*, Hanako – *contrastive*) (Saito 2010:166)

As in the interpretations (27a) to (27d), the *wa*-marked PP *Teruabibuewa* and *wa*-marked NP *Hanakowa* have four possible interpretations. Both the PP and the NP can be topics, either one of them can be a topic or a contrastive focus, and both can be contrastive foci. As Kuroda (1988) points out, when a *wa*-marked PP precedes another *wa*-marked phrase in the leftmost position of a sentence, both *wa*-marked phrases can receive thematic interpretation that is not contrastive. Suggesting a functional projection PredP, which is higher than TP and lower than CP, Saito argues that a topic phrase occupies Spec, PredP. The following structures correspond to each interpretation of (27):

- (28) a. [PredP PP-wa<sub>{top, arg, phon}</sub>] [NP-wa<sub>{top, arg, phon}</sub>] [Pred' [TP [NP-wa<sub>{-top, arg, phon}</sub>] [ T' ...  
 thematic contrastive
- b. [PredP PP-wa<sub>{top, arg, phon}</sub>] [NP-wa<sub>{top, arg, phon}</sub>] [Pred' [TP [NP-wa<sub>{-top, arg, phon}</sub>] [ T' ...  
 contrastive thematic
- c. [PredP PP-wa<sub>{top, arg, phon}</sub>] [NP-wa<sub>{top, arg, phon}</sub>] [Pred' [TP [NP-wa<sub>{-top, arg, phon}</sub>] [ T' ...  
 thematic thematic
- d. [PredP PP-wa<sub>{top, arg, phon}</sub>] [NP-wa<sub>{top, arg, phon}</sub>] [Pred' [TP [NP-wa<sub>{-top, arg, phon}</sub>] [ T' ...  
 contrastive contrastive

In (28a-d), After the NP *Hanako-wa* moves to PredP, the PP *Teruabibu-e-wa* scrambles to the edge of PredP and [arg] is licensed. Since a topic reading is obtained only if [top] is retained at Spec, Pred, the PP-*wa* in (28a), NP-*wa* in (28b), and PP-*wa* in (28c) obtain topic readings at Spec, Pred. If [top] is licensed before scrambling, the scrambled *wa*-phrase receives contrastive interpretation, as NP-*wa* in (28a), PP-*wa* in (28b), and PP-*wa* and NP-*wa* in (28d). Scrambling ‘copies all features of the moved item at the landing site, it interacts with higher functional heads ... and affects interpretation in intricate ways’ (Saito 2010:170).

Discussing topic markers in some languages, Han (1998) argues that the marker *–nun* has a specific meaning that gives *nun*-Ps topichood or contrast interpretation. The marker *–nun* presupposes a ‘non-empty set,’ which includes at least one element.

(29) presupposition of  $\alpha$ -(n)un, where  $\alpha$  is an individual and X is a set variable  
over individuals:

$$\exists X[(\alpha \in X) \wedge (|X| \geq 1)] \quad (\text{Han 1998, p.5})$$

If set X has only one element, the *nun*-P receives a topic reading only. Because there is no element that can be contrasted with the *nun*-P, only a topic reading is available. If set X has more than one element, the *nun*-P receives a contrastive reading because the *nun*-P can be contrasted with the other elements.

In this section, I discussed the several different semantic approaches to topic and contrastive focus. Because of the distinct properties of contrastive foci, such as

movement and possible topichood, some approaches consider contrastive foci to be contrastive topics, some approaches assert that contrastive foci are foci with topichood, and others argue that contrastive foci are focused topics. In the languages in which topic and focus are marked morphologically, the same markers may attach to topics, which are non-contrastive, and also to contrastive foci. Semantic approaches to those languages are divided into two groups: one group deals with topic and contrastive focus separately, and the other group tries to explain topic and contrastive focus in the same way.

## **2.5 Syntactic Approaches to Topic and Contrastive Focus**

Since the left periphery, the edge of a clause that is positioned above TP, was suggested by Rizzi (1997), the discussion of topic and focus has been one of the main topics in the syntax literature. Rizzi suggests a left periphery structure under the split CP hypothesis, stating that CP should be split into several different projections including the force projection (ForceP), the topic projection (TopP), and the focus projection (FocP). Since topics and foci may occur in initial positions in sentences, the structure of the left periphery has been discussed in depth by syntacticians.

In order to determine the more fine-grained structure of the topic phrase, left-dislocation phrases (LDs) have been examined given that they exhibit topichood behavior. Some SOV languages like Korean and Japanese have specific morphemes that are suffixed to topics and contrastive foci. These morphologically encoded topics and

contrastive foci are also discussed in the syntactic literature to figure out the properties of the left periphery.

This section reviews the suggested structures of the left periphery and discusses the properties of the LDs. This section also reviews the approaches to Korean and Japanese topic/focus structures in the left periphery. Several fine structures have been suggested for the left periphery, and these structures share some structural properties of topic projections and focus projections in the left periphery. I will introduce the suggested structures in 2.5.1.

In order to specify topic projections and contrastive focus projections in the left periphery, this section examines left-dislocated phrases and focus movement as they are discussed in the syntactic literature. In particular, it has been argued that contrastive foci move obligatorily to the left periphery. I will discuss the topichood of left dislocated phrases in 2.5.2 and the focus movement in 2.5.3.

Morphologically realized topics and contrastive foci are also discussed to specify the left periphery. I will introduce the syntactic approaches to topics and contrastive foci that are morphologically realized in Korean and Japanese in 2.5.4.

### **2.5.1 Left Periphery**

The left periphery is where interrogative and relative pronouns, topics, and focalized elements occur (Rizzi 1997). Many syntacticians like Jackendoff (1972), Chomsky (1977), Culicover and Rochemont (1983), and Rochemont (1986) have discussed the fact

that movement to the left periphery is motivated by discourse function, questioning how the ordering in the left periphery can be accounted for. Discussing the various positions on the left periphery in Italian, Rizzi (1997, 2001, 2004b) suggests a left periphery structure under the split CP analysis. The following is a simplified version of Rizzi's structure:

(30) [<sub>ForceP</sub> Force [<sub>TopP\*</sub><sup>9</sup> Top [<sub>FocP</sub> Foc [<sub>TopP\*</sub> Top [<sub>TP</sub> ....

He suggests that complementisers should be the heads of ForceP, topic constituents the heads of TopicP, and focused constituents the heads of FocP. On the basis of Italian data, he argues that TopP is recursive and may occur before or after FocP. The following Italian example presents Rizzi's structure of the left periphery:

(31) Credo che ieri QUESTO a Gianni avreste dovuto dirgli  
Force Top Foc Top Fin IP<sup>10</sup>

'I believe that yesterday THIS to Gianni you should have said.' (Rizzi 2004b:237)

As Erteschik-Shir (2007) points out, Rizzi's recursive TopP is specific to Italian because Rizzi's structure is not different from the left periphery of Hungarian except for topic recursiveness. Hungarian does not allow second topic phrases.

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<sup>9</sup> \* indicates recursiveness.

<sup>10</sup> Rizzi suggests FinP whose head marks a clause as finite or non-finite. This dissertation focuses on topic and focus, and FinP is not discussed here.

Benincá and Poletto (2004) argue that there are a larger number of functional projections than Rizzi suggests, and the functional projections are closely associated with pragmatic functions. They also argue that topic projections are not recursive, and their functional projections replace Rizzi's recursive topic projections, representing more than one focus projection. In Italian, contrastive foci precede informational foci:

(32) A GIORGIO, questo libro, devi dare.

TO GIORGIO this book you must give

‘You must give this book to Giorgio.’ (Benincá and Poletto 2004:61)

The contrastive focus *a Giorgio* precedes the informational focus *questo libro* in this sentence, and Benincá and Poletto argue that informational focus and contrastive focus have different functional projections. Arguing that TopP is followed by FocP and TopP is not recursive, they show that the lower topic position in Rizzi's left periphery is not the topic but an extension of the focus field.

(33) a. \*A GIANNI, un libro di poesie, lo regalerete.

TO GIANNI a book of poems you will give it

b. Un libro di poesie, A GIANNI, lo regalerete.

A book of poems TO GIANNI, you will give it.

‘You will give a book of poems to Gianni.’ (Benincá and Poletto 2004:54)

The contrastively focalized PP *a Gianni* ‘to John’ follows the topic DP *un libro di poesie* ‘a book of poems,’ but the opposite order results in ungrammaticality. Benincá and Poletto argue that in Rizzi’s data, only temporal adverbs are the topics below foci, and temporal adverbs cannot be considered topics because they are structurally ambiguous.

Rizzi considers intonation one of the main properties of focus. However, Benincá and Poletto point out that intonation does not necessarily indicate a focus. In the following dialogue, the left-dislocated topic is stressed:

(34) A: Mi ha ditto che il tappeto, *lo* compra l’anno prossimo.

‘He has told me that the carpet he will buy *it* next year.’

B: No, ti sbagli, IL DIVANO *lo* compra l’anno prossimo.

‘No, you are wrong, THE SOFA he will buy *it* next year.’

(Benincá and Poletto 2004:56)

Speaker B puts a stress on the left-dislocated topic which has a resumptive pronoun in the argument position. On the other hand, left-dislocated topics do not display weak crossover effects, which result from movement, while focus phrases do.

(35) a. Gianni<sub>i</sub>, suo<sub>i</sub> padre l<sub>i</sub>’ha licenziato (Left Dislocation)

Gianni<sub>i</sub> his<sub>i</sub> father has fired him<sub>i</sub>

‘Gianni has been fired by his own father.’

b. \*GIANNI<sub>i</sub>, suo<sub>i</sub> padre ha licenziato (Focus)

GIANNI<sub>i</sub> his<sub>i</sub> father has fired t<sub>i</sub> (Benincá and Poletto 2004:56)

In (35a), *Gianni* has the same index as *suo*, which Gianni c-commands, but there is not a weak crossover effect with the resumptive pronoun *lo*. On the contrary, (35b) shows a weak crossover effect without a resumptive pronoun. Benincá and Poletto argue that topics are not subject to weak crossover effects even though they may have a high intonation.

(36) A: Mario<sub>i</sub>, suo<sub>i</sub> padre non lo vede mail.

Mario, his father never sees him

‘His father never sees Mario.’

B: No, GIANNI<sub>i</sub>, suo<sub>i</sub> padre non lo vede mail.

No Gianni his father never sees him

‘No, his father never sees Gianni.’ (Benincá and Poletto 2004:57)

In speaker B’s utterance, *Gianni* is the topic but not a focus, even though it has a focal intonation. Stress does not necessarily indicate foci, but foci may move to a left position, resulting in weak crossover effects in many Romance languages including Hungarian and Italian, as Rizzi and Benincá and Poletto show.

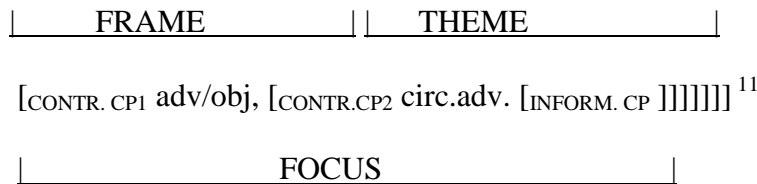
Separating the topic field from the focus field, Benincá and Poletto argue that the topic field is above the focus field and consists of two different types: the Hanging Topic



(HT) and Left Dislocation (LD). Cinque (1982) and Benincà (1988) observe that HTs can only be DPs, but LDs can be prepositions. There can be only a single HT, but more than one LD elements is available. HTs must have full resumptive pronouns, but LDs' resumptive pronouns must be clitics. HTs do not occur in relative clauses and must precede LDs if they are in the same sentence.

Benincà and Poletto argue that the left periphery can be split into a topic field and a focus field and the topic field can be split into frame and LD, speculating about 'some general properties that seem to partially depend on nonsyntactic factors':

(37) [HT [Scene Setting [LD [ LI



(Benincà and Poletto 2004:71)

Benincà and Poletto say that the topic field, which includes FRAME and THEME, may be universal, whereas the focus field may be language-specific.

Lipták (2010) suggests two functional categories for the topic field after examining Hungarian data. Comparing Italian data with Hungarian data, she argues that contrastive phrase projections are language specific.

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<sup>11</sup> LI: list information; CONTR. CP: contrastive focus projection available in the CP; INFORM. CP: informational focus projection available in the CP; circ.adv: circumstantial adverb

(38) a. Italian

?\*A suo figlio, la frutta la sbuccia, a sua figlia, la verdure la cucina

To her son the fruit it peels to her daughter the vegetables it cooks

‘For her son, she peels the fruit and for her daughter she cooks the vegetables.’

b. Hungarian

A frúknak a gyümölcsöt meghámozza, a lányoknak a zöldséget

the boys-DAT the fruit-ACC peels the girls-DAT the vegetable-ACC

viszont megfózi

C-PRT cooks

‘(S)he peels the fruit for the boys, and she cooks the vegetables for the girls.’

(Lipták 2010:194-5)

In these examples, pair-wise contrast is unique in Italian, but it is recursive in Hungarian.

Lipták suggests the following structure of the topic field, including the contrastive topic projection (CTopP):

(39) [<sub>TopP\*</sub> topic(s) [<sub>CTopP\*</sub> contrastive topic(s) [<sub>CTopP\*</sub> {C-PRT/Ø} [quantificational field . . . ]]]<sup>12</sup>

(Lipták 2010:195)

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<sup>12</sup> Lipták refers to contrastive lexical elements as contrastive particles (C-PRT) and to topics that may appear with contrastive particles as Contrastive Topics (CT).

Though Lipták's structure of the topic field is simpler than Benincá and Poletto's, one thing they share is their suggestion that non-contrastive topic phrases occur in a higher position than contrastive phrases.

As Benincá and Poletto suggest a more articulated structure for the left periphery than Rizzi's split CP structure, Aboh (2004) suggests an even more highly articulated structure for the left periphery, showing Gungbe markers that are projected in different positions. He argues that each marker is the property of a head that projects within the C-system and whose specifier hosts the corresponding fronted element. In Gungbe, marked constituents occur in the following order:

(40) Comp>Topic-[TM] > Focus -[FM] > Mood-[IM].<sup>13</sup>

Ùn ɖɔ ɖɔ làn lɔ yà Kòfí wɛ̀ Àsíbá ní ɖà-ɛ ná

1sg say that meat Det Top Kofi Foc Asiba Inj<sup>14</sup> cook-3sg for

'I said that, as for the meat Asiba should cook it for KOFI' (Aboh 2004:168)

In yes-no questions, however, the marked constituents occur sentence-finally in the opposite order:

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<sup>13</sup> TM: topic marker; FM: focus marker; IM: injunctive marker

<sup>14</sup> Injunctive

(41) IM>CD>FM>TM>QM<sup>15</sup>

De ùn d̀ò d̀ò Kòfí ní h́n ló wé yà?

as 1sg say that Kofi Inj flee Det<sub>CL</sub><sup>16</sup> Foc Top-Inter

‘As I said that Kofi should run away?’

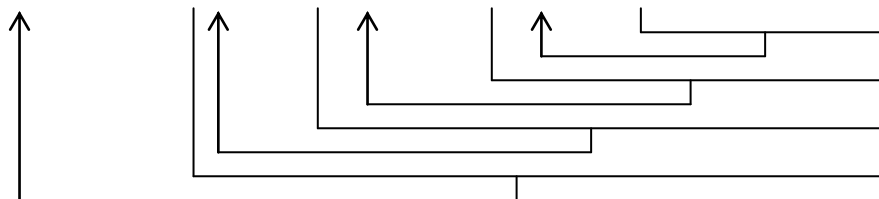
(Aboh 2004:187-8)

Aboh suggests a functional projection SpfP between FocP and FinP, and in SpfP, the clausal features [ $\pm$ specific] are checked. In Gungbe, marked constituents are pied-piped to reach another marker, and Aboh calls this ‘snowballing movement.’

(42) [ForceP [Force° d] [InterP [Inter° ∅] [TopP [Top° y] [FocP [Foc° w] [SpIP [SpI° l]]]]]

$$[_{\text{FinP}} \text{XP } [_{\text{Fin}^\circ} \text{ní } [\text{t}_{\text{XP}}]]]]]]]]]$$

[InterP [Inter° Ø [TopP [Top° [FocP [Foc° [SpfP [Spf° [FinP XP [Fin° ní [t<sub>XP</sub>]]...



(Aboh 2004:188)

The subject moves to Spec, FinP because of the EPP, and the whole FinP moves to Spec, SpfP, which moves to Spec, FocP. FocP moves to Spec, TopP, and all of the pied-piped

<sup>15</sup> CD: clausal determiner; QM: question marker

<sup>16</sup> Clausal determiner

constituents move to Spec, InterP<sup>17</sup> to check the interrogative feature. Aboh assumes that the verb or the verbal predicate needs to check its feature [ $\pm$ specific] against Sp<sup>f</sup> and this need forces the snowballing movement in interrogative sentences.

For the left periphery, several structures have been suggested for different languages, and they are different based on language. However, the structures suggested after Rizzi share one structural property in common: topic projections are above focus projections in the left periphery.

(43) [<sub>ForceP</sub> Force [<sub>TopP</sub> Top [<sub>FocP</sub> Foc [<sub>TP</sub> ....

The main argument in these suggestions is that the topic projection is above the focus projection. The syntactic properties of topic projections are lack of movement, structural independence from the rest of the clause, and preceding contrastive foci. On the basis of these current arguments and the structure (43), I will discuss the structure of topic and contrastive focus in Korean in the following chapters.

### 2.5.2 Topic and Left Dislocation in the Left Periphery

In order to specify where phrases appear in the left periphery, the syntactic properties of topic phrases have been tested in several languages. Sentence topic phrases primarily occupy the leftmost position in sentences, and as Benincá and Poletto (2004) point out,

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<sup>17</sup> Interrogative Projection

left-dislocated phrases (LDs) in Italian are sentence topics. As we saw in the previous section, the left periphery is divided into two fields in the suggested structures, the topic field and the focus field, and LDs are said to occupy the topic field.

LDs have specific properties different from foci: LDs must have a resumptive pronoun in the argument position and occur outside clause boundaries to the left. Altman (1981) and Cinque (1983) argue that LDs are generated sentence-externally, so they are not structurally related to the sentences that include resumptive pronouns. LDs do not show weak crossover effects, which means that LDs do not undergo movement. If an LD and contrastive foci occur in a sentence, the LD must precede the contrastive foci. Here are some examples from the previous section that illustrate this point:

(44) Un libro di poesie, A GIANNI, lo regalerete.

A book of poems TO GIANNI, you will give it.

“You will give a book of poems to Gianni.” (Benincá and Poletto 2004:54)

The topic LD *un libro di poesie* precedes the contrastive focus *a Gianni*. LDs in Italian are comparable to LDs in English. Quirk, Greenbaum, Leech, and Svartvik (1985) introduce ‘anticipated identification’ in informal spoken English ‘where a noun phrase is positioned initially and a reinforcing pronoun stands “proxy” for it in the relevant position in the sentence’ (Quirk, Greenbaum, Leech, and Svartvik 1985:1310). They show the following English sentences:

(45) a. *Your friend John*, I saw *him* here last night.

*That play*, it was terrible.

b. *This man I was telling you about* – well, *he* used to live next door to me.

*The book I lent you* – have you finished *it* yet?

(Quirk, Greenbaum, Leech, and Svartvik 1985:1310)

Quirk et al. say that the fronted phrases, LDs in this study, are marked topics, setting out the ‘point of departure’ for the whole utterance. Proxy pronouns perform the grammatical roles of LDs.

Corresponding to English LDs, German LDs have similar structural behaviors. Calling German LDs ‘topic constructions’, Frey (2005) compares English LDs and German LDs (‘hanging topics’ is Frey’s term).<sup>18</sup> He argues that both English LDs and German LDs do not show operator binding effects, following Vat (1981), Zaenen (1997), and Grohmann (2003), who showed the binding phenomena of German LDs:

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<sup>18</sup> Frey distinguishes the hanging topic constructions in German (HT-Ger) from the left dislocation of German (LD-Ger), following Altman (1981). In HT-Ger, there is a pause between the hanging topic phrase and the rest of the clause, and the resumptive pronoun is in the form of a personal pronoun. The resumptive pronoun may occur in the left periphery or between the left periphery and the verb at the end of the clause. If the hanging topic phrase is a DP, it has a nominative case or the same case as its resumptive pronoun. In LD-Ger, on the other hand, there is no pause between the left dislocated phrase and the rest of the clause, and the resumptive pronoun is a weak d-pronoun which has the same form as a determiner and has a case and gender.

Considering the structure of LD-Ger, Vat (1981) and Grohmann (2003) argue that the dislocated phrase moves to the left periphery, leaving the weak d-pronoun in the base position. On the other hand, Cinque (1983) and Frey (2004) argue that the dislocated phrase merges in the left periphery, and it has an A-bar chain with the resumptive pronoun and the trace.

Ger-LDs show syntactically similar distributions to Benincá and Poletto’s clitic left dislocation (CLLD). I will refer to Frey’s HT-Ger as LD in this dissertation.

(46) Operator binding:

a. English LDs

\*His<sub>1</sub> mother, every boy<sub>1</sub> likes her

b. German LDs

\*Sein<sub>1</sub> /\*Seinen<sub>1</sub> Doktorvater, jeder Linguist<sub>1</sub> verehrt ihn

His-NOM/his-ACC supervisor every linguist admires him (Frey 2005:92-3)

The operators of the universal quantifiers, ‘*every*’ in (46a) and *jeder* in (46b), have to occupy a left-peripheral position to have a scope. The ungrammaticality of (46a) and (46b) indicates that the operators cannot bind the pronouns ‘his’ in (46a) and *sein/seinen* in (46b) in the left periphery. The operator binding effects show that operators occupy higher positions than bound pronouns. No operator binding effects shows that the LDs occupy higher positions than the operators.

Principle C-effects are used for testing the possibility of movement because R-expressions must not be bound in any position in the same clause. The following examples show that English LDs and German LDs do not show Principle C-effects:

(47) Principle C-effects:

a. English LDs

The new article by Peter<sub>1</sub>, he<sub>1</sub> wants to publish it in LI.



b. German LDs

Der neue /Den neuen Artikel von Peter<sub>1</sub>, er<sub>1</sub> will ihn in LI veröffentlichen

The new-NOM / the new-ACC article by Peter he wants it in LI (to) publish

(Frey 2005:92, 94)

If the LDs moved out of the lower clauses, the R-expression *Peter* in both sentences would cause ungrammaticality because the pronouns *he* in (47a) and *er* in (47b) bind the R-expressions in the base positions in each case. The grammaticality of both sentences shows that the LDs must not move out of the clauses on their right.

LDs in Italian, English, and German have topichood and occupy the topic field of the left periphery. LDs are generated sentence-externally and do not undergo movement. LDs precede contrastive foci.

### 2.5.3 Contrastive Focus and Movement

The movement of contrastive foci has been observed in several languages like German (Moltman 1990), Hungarian (É. Kiss 1995, 1998a, 1998b, Horvath 2000), Italian (Rizzi 1997, Benincá and Poletto 2004), Japanese (Saito 1985, 1992, 2010), and Gungbe (Aboh 2006). In particular, contrastive focus may involve movement, but informational focus does not (É. Kiss 1998a). Hungarian has a focus position which precedes a verb, and focus phrases move to this position by A'-movement, causing island sensitivity (Horvath 1981, 1986, É. Kiss 1987). The preverbal focus position is associated with contrast (É.

Kiss 1996, Erteschik-Shir 2007, Kenesei 2006). Horvath (2000) claims that contrastive foci move to the left of verbs in Hungarian:

(48) Q: Kit hívtak meg?

“Who did they invite?”

a [JÁNOST] hívták meg *t*

John-acc invited-3pl Perf

“They invited JOHN (and nobody else).”

b Meghívták \*(például/többek között) JÁNOST

Perf-invited-3pl for-example/among others John-acc

“They invited JOHN, for example/among others.” (Horvath 2000:201)

In (48a), the focus *JÁNOST* moved to the left periphery and receives a contrastive reading in contrast to the focus *in situ*, which cannot receive a contrastive reading, as in (48b).

Specifying contrastive focus and informational focus, É. Kiss (1998b) argues that these two focus notions are associated with different structural positions in Hungarian.

(49) a. Mari **egy kalapot** nézett ki magának.

Mary a hat.ACC picked out herself.ACC

‘It was **a hat** that Mary picked for herself.’

b. Mari ki nézett magának EGY KALAPOT.

‘Mary picked for herself <sub>A HAT.</sub>’

(É. Kiss 1998b:249)

É. Kiss says that the phrase in bold type is a contrastive focus, and it moves to the preverbal focus slot. On the other hand, *EGY KALAPOT* in (49b) cannot receive a contrastive reading *in situ*, and it is the informational focus of the sentence. She shows the contrastive focus movement in the following examples:

(50) a. [<sub>VP</sub> Szeretném [<sub>CP</sub> ha [<sub>FP</sub> **Péterre**<sub>i</sub> szavaznátok t<sub>i</sub> ]]]

I.would.like if Peter.on voted.you

‘I wish it was Peter on whom you voted.’

b. [<sub>FP</sub> **Péterre**<sub>i</sub> szeretném [<sub>CP</sub> t<sub>i</sub> ha szavaznátok t<sub>i</sub> ]]

Peter.on I.would.like if voted.you

‘It is Peter on whom I would like you to vote.’

(É. Kiss 1998b:256)

She argues that contrastive focus movement fills Spec, FP and the contrastive foci can move out of a clause boundary. As in her structure, FP is in the left periphery; therefore, focus phrases move to the left periphery and receive contrastive readings.

Different from Hungarian and English, fixed word-order languages, free word-order languages such as German, Hindi, Japanese, Korean, and Russian share scrambling, which makes it possible for a sentence to have various surface orders without changing the meaning (Bailyn 2002). In Russian, SVO is the basic word order, but scrambling to

the position above the subject results in OSV order. The scrambled element receives a contrastive focus reading (van Gelderen 2003).<sup>19</sup>

(51) A: Nu i kak, kupili knigu ili kartinu?

well and how bought.PL book.ACC or painting.ACC

“Well, did you buy the book or the painting?”

B: Knigu, Ivan kupil, a kartinu, net

book.ACC Ivan.NOM bought but painting.ACC not

“As for the book, Ivan bought it, but as for the painting, he didn’t.”

(Van Gelderen 2003:67)

In speaker B’s utterance, the object scrambles to the left periphery over the subject, resulting in a contrastive reading. Contrastive focus triggers movement.

Movement for contrastive purposes is not limited to Russian; it occurs in many languages (Erteschik-Shir 2007). In German, contrastively focused elements move to the left in a sentence.

(52) a. Christoph hat gestern die Gitarre gespielt.

Christoph.NOM has yesterday the guitar.ACC played.

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<sup>19</sup> She assumes that the contrastive topic feature triggers the movement in the example and the contrastive focus feature is assigned to the focus *in situ*. In this dissertation, the contrastive phrases are contrastive foci, following Rooth’s definition of focus, as discussed in 2.2.

b. die Gitarre<sub>i</sub> Christoph hat gestern t<sub>i</sub> gespielt.

the guitar.<sub>ACC</sub> Christoph.<sub>NOM</sub> has yesterday played.

‘Christoph played the guitar yesterday.’ (Putnam 2006: 3)

The scrambled object *die Gitarre* in (51b) receives a contrastive reading. Putnam argues that the scrambled object above the subject is a contrastive focus. The following data support his argument:

(53) da mindestens EIN Bild Otto zum Glück heute fast Jedem t verkauft.

Since at least one picture Otto fortunately today nearly everyone sold

‘Since at least one picture Otto fortunately sold nearly everyone today.’

(Frey 2005: 125)

The scrambled phrase *ein Bild* has a fall-rise intonation, and it cannot be the topic because it is a quantified expression. It is contrastive with the other elements which Otto might sell. The scrambled phrases in the German data above result in contrast; simply put, movement generates contrast. Moltman’s (1990) examples also show that scrambling foci results in contrast in German.

(54) a. Hans hat ein BUCH dem Mann gegeben (nicht eine ZEITUNG).

Hans has a book(Acc) the man(Dat) given not a newspaper

‘Hans gave a BOOK to the man, (not a NEWSPAPER)’

b. Hans hat BÜCHER dem Mann gegeben (nicht ZIGARETTEN).

Hans has books(Acc) the man(Dat) given not cigarettes(Acc)

‘Hans gave BOOKS to the man, (not CIGARETTES)’ (Moltman 1990:15-16)

In (54a) and (54b), the scrambled objects *ein Buch* and *Bücher* are contrastive even without the contrastive negative phrases *nicht eine Zeitung* and *nicht Zigaretten*. As argued by É. Kiss (1998a), only contrastive foci, not informational foci, can move. Choi (1999) argues that contrastive foci can scramble, but informational foci cannot.

(55) a. \*weil Hans ein BUCH dem Mann gegeben hat

because Hans a book(Acc) the man(Dat) given has

‘because Hans gave a book to the man’

b. weil Hans ein BUCH dem Mann gegeben hat (nicht eine

because Hans a book(Acc) the man(Dat) given has not a

ZEITUNG)

newspaper

‘because Hans gave a book to the man, not a newspaper’ (Choi 1999:84)

The focus cannot scramble as in (55a) without receiving a contrastive reading. In (55b), the scrambled phrase receives a contrastive reading.

In many languages, contrastive foci move to the left periphery. In free word-order languages like Russian and German, focus phrases scramble to the left, receiving only contrastive readings.

#### **2.5.4 Syntactic Approaches to Topic and Focus in Korean and Japanese**

In the syntactic literature on topic and contrastive focus, Korean and Japanese data are often examined for topichood and contrastive focus because topic and contrastive focus are encoded morphologically in those languages. Korean *-nun* and Japanese *-wa* markers are suffixed to phrases, and these morphologically marked phrases receive topic readings or contrastive focus readings. The assignment of readings depends on the sentence positions of the suffixed phrases.

In order to explain the ambiguities in multiple *wa*-marked phrases in Japanese, as discussed in 2.4, Saito (2010) suggests that all *wa*-marked phrases, which have similar syntactic and semantic properties to *nun*-Ps, scramble, and scrambled *wa*-marked phrases can be thematic. Saito provides examples with multiple *wa*-marked phrases that consist of a *wa*-marked PP and a *wa*-marked argument. Saito argues that all topic phrases and contrastive focus phrases move, asserting the movement of non-argument PP, an adverbial phrase in a sentence. However, there is no clue that PPs move in sentences:

(56) A: *jinan ilyoil-e mosun-il-i issusu*

last Sunday-on what-event-NOM was

‘What happened last Sunday?’

B: *jihnan ilyoil-e-nun John-i Namsan-e sanbool-i nasda-go malhessu*

last Sunday-on-NUN John-NOM Namsan-in wild-fire-NOM occurred-that said

‘Speaking of last Sunday, John said last Sunday that there had been a wild fire in

Namsan.’

\*‘Speaking of last Sunday, John said that there had been a wild fire in Namsan last

Sunday.’

The *nun*-marked PP *jinan ilyoile-nun* ‘last Sunday’ modifies the root clause, not the embedded clause; that is, the PP cannot move out of the embedded clause. There is no island in B’s answer, so there is nothing to block movement from the embedded clause to the root clause. Saito tries to suggest one derivational process for both topic and contrastive focus, but his argument presupposes topic PP movement, though there is no evidence of the movement of topic PPs.

Considering Korean *nun*-Ps in syntax and at PF, Gill and Tsoulas (2004) propose that the content of TopP determines intonational patterns; that is, the feature [+stress] is checked in TopP. Gill and Tsoulas suggest that the reason there may only be one topic per sentence is that the first accentual phrase is realized at a level higher than the rest of the sentence. They contend that both topic and contrastive focus are related to checking the [+stress] feature. This account is syntactic, in part, because it links topic phrases to



the structural position TopP; however, the difference between a topic and a contrastive focus is not syntactic; the difference is due to intonational patterns in Gill and Tsoulas' approach.<sup>20</sup> Korean does not have a default sentential intonation pattern (Choi 1997). Without intonation, *nun*-Ps may be a sentence topic or a contrastive focus. For example, if someone mimics a robot speaking sentences without any intonation and she uses *nun*-Ps, the *nun*-Ps may receive topic readings or focus readings, depending on their positions in sentences. Many languages do not have default sentential intonation patterns. The feature [+stress] cannot be considered as checked in those languages.

For a unique explanation of the *nun*-P structure, Choi (1997) argues that *nun* is contrastive in that it implies there are other compatible entities in the discourse and that scrambled *nun*-Ps receive only a contrastive reading.

(57) John-un Mary-ga ecey manna-ess-ta.

John-TOP Mary-NOM yesterday meet-PAST-DCL

‘As for John, Mary met him yesterday (and as for Bill, Jane met him today).’

(Choi 1997: 549)

She says that the *nun*-P *John-un* is contrastive because the sentence need not be true of something else. Contrary to Choi's claim, the sentence is ambiguous because it receives

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<sup>20</sup> A *nun*-P receives a contrastive reading if it has an accent. The *nun*-P receiving a topic reading does not have a specific accent.

both a topic reading, ‘As for John, Mary met him yesterday,’ and a contrastive focus reading, ‘John, Mary met him yesterday (and Bill, Sue met him today...).’

Though Han (1998) argues that topic phrases and contrastive focus phrases are syntactically different, she explains topic and contrastive focus in the same way. Following Diesing’s (1992) analysis, in which indefinites that have quantificational force undergo Quantifier Raising (QR) and form operator-variable structures, Han argues that *nun* is quantificational if it is in a VP-external position in its immediate clause in the S-structure. Han suggests three possible interpretations of *nun*-P: topic readings, contrastive topic readings, and contrastive focus readings.

(58) a. Mary-ga takja uie *gu cheg-un* noasda

Mary-NOM table on that book-NUN put

‘Mary put the book (and nothing else) on the table.’

b. Mary-ga *gu cheg-un* takja uie noasda

Mary-NOM that book-NUN table on put

‘Mary put the book on the table. (And she threw a notebook away,...)’

c. *gu cheg-un* Mary-ga takja uie noasda

the book-NUN Mary-NOM table on put

i. ‘Mary put the book on the table. (And she threw a notebook away,...)’

ii. ‘As for the book, Mary put it on the table.’

Han argues that the *nun*-P in (58a) is in the argument position and receives a contrastive focus reading. If a *nun*-P is to the right of the subject and not in a base position, it receives only a contrastive topic reading, as in (58b). A *nun*-P on the left of a subject is interpreted as the topic or contrastive topic, as in (58c). However, Han's example (58b) fails a topic test.

(59) a. A: *gu cheg-edehesu malhebwa*

That book-about tell

'Tell me about the book.'

B: #*Mary-ga gu cheg-un takja uie noasda*

Mary-NOM that book-NUN table on put

'Mary put the book on the table. (And she threw a notebook away,...)'

b. (While speakers are talking about the book)

#*gu cheg-edehesu malhaja-myun Mary-ga gu cheg-un takja uie noasda*

the book-about tell-if Mary-NOM that book-NUN table on put

'As for the book, Mary put the book on the table. (And she threw a notebook away,...)'

These examples cannot pass the topic test; they should be considered as contrastive focus phrases because they are contrastive, prominent, and non-thematic, failing the aboutness condition of a topic. Therefore, the *nun*-P in (58b) must be considered as a contrastive focus phrase.

Directly contrary to Choi (1997), Choi (1995) argues that *nun*-Ps that receive topic readings occupy Spec, TopP and *nun*-Ps that receive contrastive focus readings occupy Spec, FocP. She distinguishes topic marker *-nun* from contrastive focus marker *-NUN*, which is stressed, arguing that the topic marker *-nun* and contrastive focus marker *-NUN* share the same form but are different markers; that is, they are different morphemes.

Because Gill and Tsoulas (2004), Choi (1995), Choi (1997), and Han (1998) do not distinguish between topic and contrastive focus syntactically, they cannot account for the unique readings of sentences like *Jasin-ui emeni-nun Mary-ga dopnunda* ‘Mary is helping her mother (and Tom is helping someone else... ).’ *Jasin-ui emeni-nun*, which includes a reflexive, cannot receive a topic reading even though it occupies the same position in the sentence as in *John-un Mary-ga dopnunda* ‘As for John, Mary is helping him’ or ‘Mary is helping John (and Tom is helping someone else... ).’ *John-un* may receive both a topic reading and a contrastive focus reading. The only superficial difference is that *jasin-ui emeni-nun* has a reflexive as a possessive pronoun. The different interpretations of the *nun*-Ps must be related to syntactic differences between *John-un* and *jasin-ui emeni-nun*.

Analyzing Japanese *wa*-marked phrases, Saito (1985) argues that if a sentence has a nominal *wa*-phrase in the sentence-initial position, the sentence is ambiguous. He suggests that a *wa*-phrase may undergo movement to the sentence-initial position or it may be generated sentence-initially and bind an empty pronominal *pro*. Hoji (1985) argues that the *wa*-phrases that do not move to the sentence-initial position are not

contrastive, whereas moved *wa*-phrases receive only a contrastive interpretation, showing the island sensitivity and reconstruction effects of contrastive *wa*-phrases.

In the syntactic literature on topic and contrastive focus in Korean and Japanese, there are two ways to deal with topics and contrastive foci: unifying two categories syntactically and differentiating the topic structure from the contrastive focus structure. Topic and contrastive focus are treated similarly because they can have the same morpheme. On the other hand, they are treated differently because topic phrases and contrastive focus phrases have syntactically different properties, showing different grammaticality in movement tests, such as island effects.

In this dissertation, I discuss the structural difference between topic and contrastive focus according to the following claims: the topic projection is the projection above the focus projections in the left periphery; sentence topics occupy the topic projection and they are not recursive in a sentence; LDs are sentence topics and occupy the topic projection; LDs are structurally independent from the rest of the sentence and do not undergo movement; contrastive phrases are contrastive foci, which undergo movement.

### **Chapter 3: Theoretical Framework**

The structure of topic phrases and focus phrases is discussed in recent syntactic approaches, based on the syntactic complexity of the left periphery, which is composed of several different projections including TopP and FocP. The richness of the left periphery is a driving factor in current cartographic projects concerning the left periphery, such as Benincá and Poletto 2004, Aboh 2004, and Lipták 2010, and another driving factor is ‘the intuition of the fundamental uniformity and underlying simplicity of the basic constituents – the syntactic atoms’ (Rizzi 2004a:3). The fundamental intuition of simplicity is also the nucleus of minimalism, and rich structures are composed of simple structures. For this reason, Rizzi suggests that cartographic projects of the left periphery and minimalism have been developed in parallel.

Topic phrases and focus phrases have several different syntactic properties, indicating different dedicated positions in the left periphery. In the minimalist framework, different scope-discourse properties are specified as features, which are checked in derivational processes. In this chapter, I will provide an overview of the theoretical framework for this study, the Minimalist Program. I will also specify the diagnostic methods for movement, which will be used to test examples in following chapters.

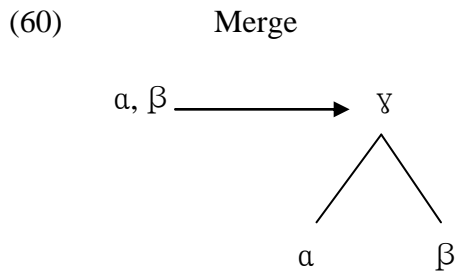
### **3.1 The Minimalist Program: Overview**

This study is written within the framework of the Minimalist Program, a major research branch within generative grammar. The Minimalist Program is motivated by the assumption that there is a component of the human brain for language acquisition, the language faculty, which provides human beings with a set of procedures that make them able to acquire the grammar of their native languages (Chomsky 1995b). The assumption on which the Minimalist Program relies is that the properties of the language faculty must be simple enough to function for any language.

According to Chomsky, the language faculty includes a lexicon, a mental dictionary, and a computational system described in the Minimalist Program. Lexical items in a lexicon are selected for a computation that produces a derivation, forming a hierarchical sentence structure. The created structures are sent to the phonological interface and the semantic interface. All operations follow the principle of economy, the core concept of the Minimalist Program.

The language faculty contains a set of features causing derivational processes. The features are checked with other features and used to construct a language. The language faculty specifies the features that are available in each particular language (Chomsky 1999, 2001b, 2007b). The features enter into a language and cause the operation to form language: the features are combined to form lexical items, and lexical items form a numeration, in which items are selected to form an utterance.

A numeration of an utterance includes a set of lexical items, which are selected for a derivation to form the utterance. The lexical items are inserted into a structure-building procedure via a primitive operation Merge that takes two syntactic objects  $\alpha$  and  $\beta$  to form the new object  $\gamma = \{\alpha, \beta\}$  (Chomsky 1999, 2001b, 2007b).



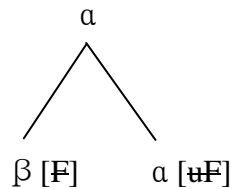
When  $\alpha$  and  $\beta$  are merged, the merged structure  $\gamma$  is labeled from  $\alpha$  or  $\beta$ . The label is a determinate type, the phrase type. If  $\alpha$  is a verb (V) ‘have’ and  $\beta$  is a Determiner Phrase (DP) ‘books’, the label of  $\gamma$  is V and the resulting structure is a VP.

Merged elements can form an Agree relation in a syntactic structure. The features of the language faculty are interpretable or uninterpretable. An uninterpretable feature [uF], which does not have a role in semantic interpretation, must be checked by an interpretable feature [F], which has a role in semantic interpretation. Otherwise, the derivation fails because unchecked features are ineligible at Phonetic Form (PF). Any component with an unchecked [uF] cannot be spelled out (Chomsky 1995b, 1998). Agree is a relation between  $\alpha$  with [uF] and  $\beta$  with [F], and the uninterpretable feature [uF] and



the interpretable feature [F] are checked and deleted, being in the relationship, Agree (Chomsky 1999, 2001b, 2007b).

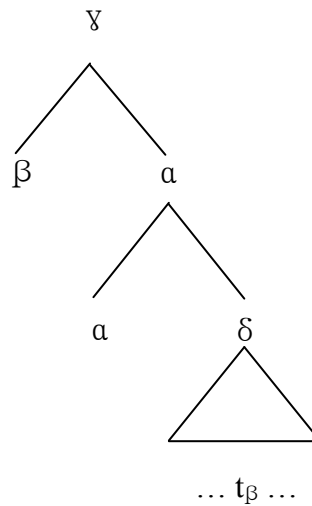
(61) Agree:



Agree is affected by locality effects. When a head with [uF] is merged, it becomes a probe that looks for a matching element in its complement, an expression with which the probe is able to agree. That is, Agree involves a relation between a probe, a head with an uninterpretable feature, and a goal, an element with an interpretable feature. The agreement between a probe and its goal must be subject to the locality principle; in other words, the goal must be the closest possible matching element when the probe looks for its goal.

If an uninterpretable feature cannot be checked by Agree, the probe attracts the goal, resulting in Move.

(62) Move (Rmerge):



An element which undergoes Move was merged before movement. Epstein et al. (1998), therefore, refer to Move as Rmerge. Move is also considered to be an operation copying an element from one position to a position where the element is remerged (Chomsky 1993, Cover and Nunes 2007).

Merge, or Merge without Move, is referred to as ‘external Merge’ since an element is selected from a numeration and merged with another element without Move. Move, which is Rmerge, is referred to as ‘internal Merge’ since an element has been merged from a numeration to a derivation, and it is merged again from an internal position of the structure to another internal position (Chomsky 2004, 2006, 2007a). In this dissertation, ‘Merge’ indicates the external Merge and ‘Move’ the internal Merge. Also, ‘merging’ or ‘being merged’ indicates the operation of merging externally, and ‘moving’ or ‘being moved’ the operation of merging internally.

### 3.2 Diagnostic Methods for Merge and Move

To form an utterance, lexical items are selected from a numeration, and each lexical item must be merged in the syntactic structure of the utterance, as discussed in 3.1. The syntactic structure should consist only of interpretable features, and uninterpretable features must be removed from the structure before the semantic interface rules apply (Adger 2003). If a merged item contains an uninterpretable feature, the item moves to a position where the uninterpretable feature can be checked with an interpretable feature, changing the word order and leaving a copy in the base position.

(69) Who you met yesterday...

Who<sub>i[Q]</sub> you met who<sub>i[Q]</sub> yesterday

*Who* moves to the left in order to check the uninterpretable feature [Q]. The moved item carries the grammatical function in the sentence, so *who* is the object in this case.

On the other hand, a merged item does not change word order, and there is no copy of the merged item in the sentence.

(70) Bill, I just met him at the post office.

This sentence does not have any argument gap, and *I* and *him* keep their grammatical functions, subject and object. The left-dislocated phrase *Bill* is merged in the left periphery, and *Bill* does not represent any grammatical role that is related to the verb *met*.

Island constraints, reconstruction, and Weak Crossover (WCO) effects are generally used as diagnostic methods for movement. If an element in a sentence moves over a clause boundary, the sentence shows sensitivity to island constraints, but a merged element is not sensitive to island constraints in any case. If an anaphor moves over a co-referring phrase, it must be reconstructed in the base position to be bound by the co-referring phrase. Anaphors cannot be merged to the leftmost position of a sentence since anaphors must be bound by another constituent in the sentence. If an element moves over another phrase, embedding a co-indexed pronoun, it results in the ungrammaticality of the sentence. A merged element in the leftmost position does not result in ungrammaticality in any case if the sentence includes a co-indexed pronoun. Using these diagnostics, we can see whether constituents move or merge in sentences. The diagnostics will be used to characterize topic and focus in Korean as resulting from Merge or Move.

### **3.2.1 Island Phenomena**

Adger (2003) investigates island phenomena in detail with English examples. I summarize his description of island phenomena here to show some diagnostic tests of

movement. DP involves one of the sets of island phenomena, and he calls it ‘DP islands,’ which is traditionally termed ‘Complex Noun Phrase Islands.’

(71) a. I believed [<sub>DP</sub> the claim [<sub>CP</sub> that Philip would invade the city of Athens]].

b. \*Which city do you believe [<sub>DP</sub> the claim [<sub>CP</sub> that Philip would invade]]?

(Adger 2003:391)

In each sentence, the noun *claim* has a CP complement, and in (71b), *which city* moves out of the CP complement, resulting in ungrammaticality. The same result is observed in the DPs with PP complements.

(72) a. Plato listened to [<sub>DP</sub> Demosthenes’ oration [<sub>PP</sub> about Philip]].

b. \*Who did Plato listen to [<sub>DP</sub> Demosthenes’ oration [<sub>PP</sub> about]]?

(Adger 2003:391)

Even without an embedded CP boundary, (72b) is ungrammatical. In both ungrammatical cases, the complement of which a *wh*-phrases moved out is embedded in a definite DP. This shows definite DP islands for movement from an XP, which is embedded in the DP. DP islands block movement, and the grammaticality of the sentence with a definite DP shows if an element moves out of the definite DP.

Another kind of island is the subject island: elements cannot move out of a subject clause. The traditional term for subject island phenomena is ‘the Sentential Subject constraint’ (Ross 1967).

- (73) a. It was obvious that Plato loved Aster.  
b. Who was it obvious that Plato loved?  
c. That Plato loved Aster was obvious.  
d. \*Who was that Plato loved obvious? (Adger 2003:393-4)

In (73b), it is possible to move an element out of the CP complement of the adjective *obvious*, but the movement out of the subject CP in (73d) is not possible. CP subjects are islands. Like CP subjects, adjuncts are islands for movement.

- (74) a. Hephaestus had run away, before the executioner murdered Hara.  
b. \*Who had Hephaestus run away, before the executioner murdered?  
c. Hephaestus had run away, because the executioner murdered Hara.  
d. \*Who had Hephaestus run away, because the executioner murdered?  
(Adger 2003:399)

As in (74b) and (74d), nothing can move out of adjuncts. The grammaticality of the sentence with a subject CP or an adjunct shows if an element moves out of the subject CP

or the adjunct. Therefore, DP islands, subject CP islands, and adjunct islands can be used for the diagnostics of Merge and Move.

### 3.2.2 Reconstruction Effects

Reconstruction is another diagnostic for movement because a moved element can be placed back in a previous position through the reconstruction process. If a phrase with an anaphor moves over a phrase that has the same index as the anaphor, the moved phrase is reconstructed in the base position. Bošković (2002, 2007) explains reconstruction effects with the data from Lebeaux (1991):

- (75) a. \*[His<sub>i</sub> mother's<sub>j</sub> bread] seems to her<sub>j</sub> \_\_\_\_ to be known by every man<sub>i</sub> to be \_\_\_\_  
the best there is.
- b. [His<sub>i</sub> mother's<sub>j</sub> bread] seems to every man<sub>i</sub> \_\_\_\_ to be known by her<sub>j</sub> to be \_\_\_\_  
the best there is. (Lebeaux 1991: 234)

In (75a), the subject of the matrix clause *his mother's bread* must be reconstructed in the most embedded clause so that *his* will be bound by the co-indexed phrase *every man*.

When *his mother's bread* is reconstructed, however, the binding condition C is violated because the pronoun *her* c-commands *mother*. In (75b), on the other hand, *his mother's bread* can be reconstructed in the higher embedded clause without a binding condition C violation. The following data is a simple sentence showing reconstruction.

(76) [<sub>VPj</sub> Criticize himself<sub>i</sub>] John<sub>i</sub> never will t<sub>j</sub>.

(Haegeman 1994:529)

The reflexive *himself* must be reconstructed to be bound by *John*. Movement is a necessary condition for reconstruction, so reconstruction effects are a diagnostic method for movement.

### 3.2.3 Weak Crossover Effect and Scrambling

Weak Crossover (WCO) effects refer to restrictions in movement: a phrase cannot move across another phrase with a co-indexed pronoun.

(77) a. Who<sub>i</sub> loves his<sub>i</sub> mother?

b. \*Who<sub>i</sub> does his<sub>i</sub> mother love t<sub>i</sub>?

(Haegeman 1994:417)

A pronoun within a subject DP does not c-command the trace of a quantificational phrase or a *wh*-phrase that is co-indexed with the pronoun, and the sentence is ungrammatical.

WCO effects result from movement, so they are used as a diagnostic for movement.

Scrambling, which is a type of movement, may or may not show WCO effects. Clause-internal scrambling suppresses WCO effects, but long-distance scrambling shows WCO effects. If a phrase moves clause-internally and does not show WCO effects, the movement is scrambling. A phrase that scrambles over a clause boundary shows WCO effects. Therefore, there is a grammatical element, and it suppresses WCO effects in



clause-internal movement, but it cannot suppress WCO effects in the movement over a clause boundary; the element scrambles in the sentences. For that reason, WCO effects are used not only to prove that an element moves in a sentence but also to identify scrambling (Gurtu 1986, Saito and Hoji 1983). Takano (2010) describes WCO effects in detail with Japanese data, and I summarize Takano’s description of WCO effects in Japanese to discuss WCO effects and scrambling.

There are asymmetries between clause-internal and long-distance scrambling in Japanese and Hindi (Mahajan 1990, Saito 1992, Tada 1990, 1993, Takano). The following examples show clause-internal scrambling:

- (78) a. \*Soko<sub>i</sub>-no syain-ga mittu-izyoo-no kaisya<sub>i</sub>-o tyoosasita.  
           it-GEN employee-NOM three-or.more-GEN company-ACC investigated  
       b. Mittu-izyoo-no kaisya<sub>i</sub>-o soko<sub>i</sub>-no syain-ga tyoosasita.  
           three-or.more-GEN company-ACC it-GEN employee-NOM investigated  
       ‘Their employees investigated three or more companies.’ (Takano 2010:84-5)

In (78a), the pronoun *soko* in the subject DP *solino syainga* ‘their employees’ cannot be bound by the quantificational phrase *mittuizyoo no kaisyao* ‘three or more companies’ in the object position. To be co-indexed with the quantificational phrase, the pronominal must be c-commanded by the quantificational phrase. The pronoun in the subject DP *sokono* cannot be co-indexed with the noun of the object quantificational phrase. In (78b), on the other hand, *soko* and *kaisyao* can be co-referential after the object quantificational

phrase scrambles to the front of the sentence. Scrambling *mittuizyoono kaisyao* over the co-referring pronoun *sokono* makes the quantificational phrase c-command and bind the pronominal suppressing a WCO effect.

In contrast, long-distance scrambling, which is scrambling out of a clause, does not show the same effects.

(79) a. \*Soko<sub>i</sub>-no syain-ga      Aya-ni [Ken-ga    mittu-izyoo-no    kaisyao<sub>i</sub>-o  
          it<sub>-GEN</sub>    employee<sub>-NOM</sub> Aya<sub>-DAT</sub>    Ken<sub>-NOM</sub> three-or.more<sub>-GEN</sub> company<sub>-ACC</sub>  
          tyoosasita    to]   itta.  
          investigated that told

b. \*Mittu-izyoo-no    kaisyao<sub>i</sub>-o    soko<sub>i</sub>-no syain-ga      Aya-ni [Ken-ga  
          three-or.more<sub>-GEN</sub> company<sub>-ACC</sub> it<sub>-GEN</sub>    employee<sub>-NOM</sub> Aya<sub>-DAT</sub>    Ken<sub>-NOM</sub>  
          tyoosasita    to]   itta.  
          investigated that told

‘Their employees told Aya that Ken investigated three or more companies.’

(Takano 2010:85)

In (79a), the pronoun *sokono* is in the subject phrase, and it cannot be co-indexed with the quantificational clause *in situ*. In (79b) the quantificational phrase scrambles to the left periphery of the matrix clause, but WCO effects are not suppressed after scrambling. The pronoun in an indirect object phrase also cannot be co-indexed with a quantificational phrase in an embedded clause.

(80) a. \*Aya-ga soko<sub>i</sub>-no syain-ni [Ken-ga mittu-izyoo-no kaisya<sub>i</sub>-o  
 Aya-NOM it-GEN employee-DAT Ken-NOM three-or.more-GEN company-ACC  
 tyoosasita to] itta.  
 investigated that told

b. \*Mittu-izyoo-no kaisya<sub>i</sub>-o Aya-ga soko<sub>i</sub>-no syain-ni [Ken-ga  
 three-or.more-GEN company-ACC Aya-NOM it-GEN employee-DAT Ken-NOM  
 tyoosasita to] itta.  
 investigated that told

‘Aya told their employees that Ken investigated three or more companies.’

(Takano 2010:85-6)

Like the pronoun in the subject phrase, the pronoun in the indirect object phrase cannot be co-indexed with the quantificational phrase, even after the quantificational phrase scrambles to the left periphery of the matrix clause. This indicates that long-distance scrambling cannot suppress WCO effects.

So far, all the embedded clauses containing quantificational phrases have been finite clauses. Mahajan (1989) observes in Hindi that scrambling out of an infinite clause suppresses WCO effects. Nemoto (1993) examines Japanese scrambling on the basis of Mahajan’s Hindi examples and observes that Japanese scrambling shows the same phenomena.

(81) a. \*Soko<sub>i</sub>-no syain-ga [mittu-izyoo-no kaisya<sub>i</sub>-o tyoosasi-yoo to]  
 it-GEN employee-NOM three-or.more-GEN company-ACC investigate-will that  
 sita.  
 did

b. Mittu-izyoo-no kaisya<sub>i</sub>-o soko<sub>i</sub>-no syain-ga [tyoosasi-yoo to]  
 three-or.more-GEN company-ACC it-GEN employee-NOM investigate-will that  
 sita.  
 did

‘Their employees tried to investigate three or more companies.’ (Takano 2010:86)

(81a) has a subject control construction, and the object quantificational phrase cannot bind the pronoun in the matrix subject, resulting in ungrammaticality. In (81b), the quantificational phrase scrambles to the left periphery of the matrix clause, suppressing WCO effects. Object control constructions show the same effects.

(82) a. \*Ken-ga soko<sub>i</sub>-no syain-ni [mittu-izyoo-no kaisya<sub>i</sub>-o  
 Ken-NOM it-GEN employee-DAT three-or.more-GEN company-ACC  
 tyoosasuru yoo(ni)] iraisita.  
 investigate C asked

- b. ?mittu-izyoo-no      kaisya<sub>i</sub>-o      Ken-ga   soko<sub>i</sub>-no   syain-ni  
                                  three-or.more-<sub>GEN</sub>   company-<sub>ACC</sub>   Ken-<sub>NOM</sub>   it-<sub>GEN</sub>   employee-<sub>DAT</sub>  
                                  [tyoosasuru   yoo(ni)] iraisita.  
                                  investigate   C                   asked
- c. ?Ken-ga   mittu-izyoo-no      kaisya<sub>i</sub>-o      soko<sub>i</sub>-no   syain-ni  
                                  Ken-<sub>NOM</sub>   three-or.more-<sub>GEN</sub>   company-<sub>ACC</sub>   it-<sub>GEN</sub>   employee-<sub>DAT</sub>  
                                  [tyoosasuru   yoo(ni)] iraisita.  
                                  investigate   C                   asked

‘Ken asked their employees to investigate three or more companies.’

(Takano 2010:87)<sup>21</sup>

In (82a), the co-indexed pronoun is not bound by the quantificational phrase, but in (82b) and (82c), the scrambled quantificational phrase c-commands the co-indexed pronoun, and the grammaticality of (82b) and (82c) is much better than that of (82a). Takano generalizes his observations: ‘scrambling out of a control clause patterns with clause-internal scrambling’ (Takano 2000: 88).

In summary, clause-internal scrambling may suppress WCO effects, but scrambling out of a clausal boundary may not. Scrambling out of control clauses may suppress WCO effects, as does clause-internal scrambling. Island effects, reconstruction

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<sup>21</sup> Takano says that Nemoto (1993) judges (b) and (c) fully acceptable on the bound variable reading, but he finds them slightly bad.

effects, and WCO effects will be the diagnostics used to characterize topic and focus in Korean as resulting from Merge or Move.

## Chapter 4: Topic Merge

In this chapter, I discuss the topichood resulting from Merge and the Korean *nun*-P sentence structure. Topic phrases are mainly sentence-initial and generally pronounced without specific accents. Topic phrases are not related to a variable in the clause, as opposed to focus phrases (Benincà and Poletto 2004). I suggest that topic phrases merge in the left periphery, which is positioned above TP, without undergoing movement. To show that topic phrases do merge, not move, I will test topic *nun*-Ps through the diagnostic methods of island effects, reconstruction effects, and WCO effects, which are used to show that an element undergoes movement. If a sentence does not show island effects, reconstruction effects, or WCO effects, no movement occurs in the sentence. If a sentence includes a topic *nun*-P and does not show any of those effects, the topic *nun*-P must not undergo movement.

In many languages like Italian (Benincà and Poletto 2004), German (Frey 2005, Vat 1981, Zaenen 1997, Grohmann 2003), and English (Quirk, Greenbaum, Leech, and Svartvik 1985), sentence-initial topic phrases have the same index as resumptive pronouns in argument positions. Pro-drop languages like Korean and Japanese avoid redundancy and omit the pronoun if the meaning is supplied by another argument in the same sentence or by discourse features. It is common to omit an argument if there is a co-indexed phrase preceding the argument. Hoji (1985) and Saito (1985) argue that *pro*, a covert pronoun, occupies the argument position when a topic phrase occurs sentence-initially and an argument is missing that is co-indexed with the topic phrase. The co-

indexed *pro* is an equivalent of a resumptive pronoun co-indexed with a sentence-initial topic phrase in Gungbe, Italian, German, and English. Following Hoji and Saito, I argue that there is a *pro* in an argument position in Korean, and the *pro* is co-indexed with the *nun*-P that receives a topic reading.

#### 4.1 Merge and Topichood

Korean *nun*-Ps are interpreted as sentence topics or contrastive foci. Different interpretations result from the different positions of *nun*-Ps in sentences. The following sentences show topic *nun*-Ps and contrastive focus *nun*-Ps.

(83) A: *gu cheg-i udie issu*

that book-NOM where is

‘Where is the book?’

B: a. *gu cheg-un Mary-ga takja uie noasu*

the book-NUN Mary-NOM table on put

‘As for the book, Mary put it on the table.’

#‘Mary put the book on the table (but she might not put other things...)’



b. #Mary-ga *gu cheg-un* takja uie noasu

Mary-NOM that book-NUN table on put

c. #Mary-ga takja uie *gu cheg-UN* noasu

Mary-NOM table on that book-NUN put

‘Mary put the book on the table (but she might not put other things...)’

In the dialogue of (83), *gu cheg* ‘the book’ is the topic because the question is asking about the book. In (83a), the *nun*-P is in the leftmost position, and it receives a topic reading. Only (83a) is an appropriate answer to the question, and (83b) and (83c) cannot be the answers because the *nun*-Ps in other positions than the leftmost position receive only contrastive focus readings. In the following dialogue, on the other hand, (84a), (84b), and (84c) can all be appropriate answers:

(84) A: Mary-ga *ne cheg-ul* modu gajugassu

Mary-NOM my book-ACC all took

‘Mary took all of my books.’

B: a. *yuksa cheg-un* Mary-ga takja uie noassu

history book-NUN Mary-NOM table on put

#‘As for the history book, Mary put it on the table.’

‘Mary put the history book on the table (and she took the rest of the books.)’

b. Mary-ga *yuksa cheg-un* takja uie noassu

Mary-NOM history book-NUN table on put

c. Mary-ga takja uie *yuksa cheg-UN* noassu

Mary-<sub>NOM</sub> table on history book-<sub>NUN</sub> put

‘Mary put the history book on the table (and she took the rest of the books.)’

All the *nun*-Ps may receive contrastive focus readings, so they can be contrastive to the rest of the books that Mary took. *Nun*-Ps may receive topic readings or contrastive focus readings, but only *nun*-Ps in the leftmost position can be interpreted as sentence topics.

Though the *nun*-P in the leftmost position may receive either a topic reading or a contrastive reading, non-argument *nun*-Ps in the left periphery receive only topic readings.

(85) a. A: musun gwail-ul joahe

which fruit-<sub>ACC</sub> like

‘Which fruit do you like?’

B: gwail-un sagwa-ga masissu

fruit-<sub>NUN</sub> apple-<sub>NOM</sub> tasty-is

‘Speaking of fruits, apples are tasty.’

b. A: *jigum gwail-hago yache sayadwe*

now fruit-and vegetable buy-should

‘Now, I should buy some fruits and vegetables.’

B: *gwail-un sagwa-ga masissu*

fruit-NUN apple-NOM tasty-is

‘Speaking of fruits, apples are tasty.’

\*‘As for fruits, apples are tasty (and as for vegetables, carrots are tasty....)’

The topic of the dialogue (85a) is *gwail* ‘fruit,’ and with the non-argument *nun*-P *gwail-un*, which receives a topic reading, the answer is appropriate. In (85b), there are two elements, *gwail* and *yache* ‘vegetable’ in the context, but the *nun*-P *gwail-un* cannot be contrastive to *yache* since the non-argument *nun*-P cannot be interpreted as a contrastive focus. The *nun*-P is not an argument of a sentence, but it is merged in the left periphery, receiving a topic reading. The following examples also have merged *nun*-Ps, which receive topic readings only:

- (86) a. A: ko-ga    ulgool-esu joongyohe ko-ga    yepu-myun ulgool-i yepu-boiji  
           nose-NOM face-at    important    nose-NOM pretty-if    face-NOM pretty-look  
           ‘Noses are important in the faces. If a nose is pretty, the face looks pretty.’
- B: ko-nun    [Mary-ui ko-ga    yepu]  
           nose-NUN Mary-GEN nose-NOM pretty-is.  
           ‘Speaking of noses, Mary’s nose is pretty.’
- \*‘As for noses, Mary’s nose is pretty (but as for eyes, Bill’s eyes are pretty....)’
- b. A: ko-wa    noon-i ulgool-esu joongyohe ko-wa    noon-i yepu-myun  
           nose-and eye-NOM face-at    important    nose-and eye-NOM pretty-if  
           ulgool-i yepu-boiji  
           face-NOM pretty-look  
           ‘Noses and eyes are important in the faces. If a nose and eyes are pretty, the  
           face looks pretty.’
- B: #ko-nun    [Mary-ui ko-ga    yepu]  
           nose-NUN Mary-GEN nose-NOM pretty-is.  
           ‘Speaking of noses, Mary’s nose is pretty.’
- \*‘As for noses, Mary’s nose is pretty (but as for eyes, Bill’s eyes are pretty....)’

*Ko* in *ko-nun* is a generic noun phrase that refers to a whole class of noses. In (85a), the generic *nun*-P receives a topic reading, but it cannot receive a contrastive focus reading, as shown in (85b): two generic terms representing parts of faces, noses and eyes, are talked about and the generic *nun*-P *ko-nun* ‘noses’ cannot receive the contrastive focus

reading that makes the *nun*-P contrastive to the other face parts, eyes. The generic *nun*-P *Ko-nun* receives only a topic reading. In both (85) and (86), the *nun*-Ps are not arguments, and they are structurally independent from the rest of the sentence. These phrases do not move from an argument position to a higher position, but they are merged, receiving only topic readings.

The non-argument topic *nun*-Ps share one property with the *nun*-Ps that receive topic readings and contrastive focus readings: both types of *nun*-P are in the left periphery. One difference between non-argument *nun*-Ps and ambiguous *nun*-Ps is that the ambiguous *nun*-Ps might undergo movement because there are empty object positions in the ambiguous sentences.

(87) a. gwail-un sagwa-ga masisji

fruit-NUN apple-NOM tasty-is

‘Speaking of fruits, apples are tasty.’

b. gu saram-un Mary-ga John-ege e sogehessu

that person-NUN Mary-NOM John-DAT introduced

‘As for the person, Mary introduced him to John.’

‘That person, Mary introduced to John (and Bill, Mary introduced to Anne...).

The non-argument *nun*-P *gu dosi-nun* in (87a) merges in the left periphery, and it is independent from the argument relationship in the rest of the sentence. On the other hand, in (87b), which contains the *nun*-P *gu saram-un* in the left periphery, the object position

is empty, showing the possibility of movement. In both (87a) and (87b), *nun*-Ps receive topic readings, but only the *nun*-P in (87b) may receive a contrastive focus reading, showing the possibility of movement.

## 4.2 Topic *Nun*-Ps and Diagnostic Methods for Movement

In this section, using diagnostic methods for movement, I will show that topic *nun*-Ps do not undergo movement. A *nun*-P in the left periphery can be co-indexed with an empty category in a complex NP:

(88) A: nu gu hakseng ani

you that student know

‘Do you know the student?’

B: gu hakseng<sub>i</sub>-un ne-ga [[ e<sub>i</sub> cha-ro chi-go domangga-n] saram-ul] chajanessu

that student-<sub>NUN</sub> I-<sub>NOM</sub> car-by hit-and ran-that man-<sub>ACC</sub> found

‘As for the student, I found the man who had run him over with a car and had run away.’<sup>22</sup>

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<sup>22</sup> In Chapter 4, I am focusing on topic *nun*-Ps, so I will give only the interpretation of topic readings for each example. I will discuss contrastive foci in Chapter 5 and 6.

In B's answer, the *nun*-P *gu hakseng-un* is co-indexed with the empty category in the complex NP that is delimited by the square brackets, and it receives a topic reading. The *nun*-P cannot receive a contrastive focus reading.

(89) A: nu i-gyosil amoodo moru-ji

you this-class anybody not-know-right

'You don't know anybody in this class, do you?'

B: #i haksengi-un ne-ga [[ e<sub>i</sub> cha-ro chi-go domangga-n] saram-ul] chajanessu

this student-NUN I-NOM car-by hit-and ran-that man-ACC found

In this dialogue, the *nun*-P *i hakseng-un* cannot be contrastive to the other students in the class because *i hakseng-un* cannot receive a contrastive focus reading. The empty category can be replaced with a pronoun:

(90) a. A: nu gu hakseng ani

you that student know

‘Do you know the student?’

B: gu hakseng<sub>i</sub>-un ne-ga [[gulul<sub>i</sub> cha-ro chi-go domangga-n] saram-ul]

that student-NUN I-NOM him car-by hit-and ran-that man-ACC

chajanessu

found

‘As for the student, I found the man who had run him over with a car and had run away.’

b. A: nu i-gyosil-e amoodo molla

you this-class-in anybody not-know

‘You don’t know anybody in this class.’

B: #i hakseng<sub>i</sub>-un ne-ga [[gulul<sub>i</sub> cha-ro chi-go domangga-n] saram-ul]

this student-NUN I-NOM him car-by hit-and ran-that man-ACC

chajanessu

found

*Gu hakseng-un* in the left periphery of this sentence receives only a topic reading in the sentence with a pronoun, which has the same index as the *nun*-P, as in the sentence with an empty category, which has the same index as a *nun*-P. There is no Complex NP Constraint (CNPC) violation in either sentence, and each *nun*-P in both sentences receives only a topic reading.



Topic *nun*-Ps are also not subject to the adjunct island constraint. *Nun*-Ps can occur with a co-indexed empty category in an adjunct phrase:

(91) A: gu gisa-egege malhebwa

that article-about tell

‘Tell me about the article.’

B: gu gisa<sub>i</sub>-nun Mary-ga e<sub>i</sub> sasil-i anigi temune gu cholpansa-e hanguihessu

that article-NUN Mary-NOM true not-be because that publisher-to complained

‘As for the article, Mary complained to the publisher because it was not true.’

Gu gisa ‘the article’ is the topic of the dialogue (91), and *gu gisa-nun* with a co-index in the empty category in the adjunct phrase receives a topic reading. The *nun*-P cannot be contrastive:

(92) A: unu gisa-egege Mary-ga hanguihessu

which article-about Mary-NOM complained

‘Which article was Mary complaining about?’

B: #gu gisa<sub>i</sub>-nun Mary-ga e<sub>i</sub> sasil-i anigi temune gu cholpansa-e

that article-NUN Mary-NOM fact-NOM not-be because that publisher-to

hanguihessu

complained

The empty category can be replaced with a pronoun as in a complex NP:

(93) a. A: gu gisa-egege malhebwa

that article-about tell

‘Tell me about the article.’

B: gu gisa<sub>i</sub>-nun Mary-ga gugus<sub>i</sub>-i sasil-i anigi temune gu cholpansa-e

that article-NUN Mary-NOM it-NOM fact-NOM not-be because that publisher-to

hanguihessu

complained

‘As for the article, Mary complained to the publisher because it was not true.’

b. A: unu gisa-egege Mary-ga hanguihessu

which article-about Mary-NOM complained

‘Which article was Mary complaining about?’

B: #gu gisa<sub>i</sub>-nun Mary-ga gugus<sub>i</sub>-i sasil-i anigi temune gu cholpansa-e

that article-NUN Mary-NOM it-NOM fact-NOM not-be because that publisher-to

hanguihessu

complained

As in (92) and (93), in which the *nun*-P co-indexed with an empty category receives a topic reading, the *nun*-P co-indexed with the pronoun in the adjunct clause only receives a topic reading. In the sentence whose adjunct includes a co-indexed empty category and the sentence whose adjunct includes a co-indexed pronoun, *nun*-Ps receive topic readings

only. *Nun*-Ps in the left periphery do not show island effects; thus, the topic *nun*-Ps do not move.

Topic *nun*-Ps are not subject to reconstruction. When a phrase with an anaphor moves over a phrase that has the same index as the anaphor, the moved phrase is reconstructed in the base position.

- (94) *jasin<sub>i</sub>-ui gisa-lul John<sub>i</sub>-i e ilgusda*  
 self-GEN article-ACC John-NOM read  
 ‘John read an article written by himself.’

The moved phrase *jasinui gisalul* must reconstruct in the base position since the anaphor must be bound by *John*. *Nun*-Ps, including anaphors, must be reconstructed to make the anaphors bound by their antecedents. The *nun*-Ps, including anaphors, cannot receive topic readings:

- (95) A: *jasinui gisa-lul noo-ga uci-hes-dagoo*  
 self-GEN article-ACC who-NOM how-did-said  
 ‘You said who did what for his own article?’  
 B: #*jasin<sub>i</sub>-ui gisa-nun John<sub>i</sub>-i e<sub>i</sub> ilgussu*  
 self-GEN article-NUN John-NOM read  
 \*‘As for the article about himself, John read it.’

In B's answer, the anaphor *jasin* has the same index as *John*, and this sentence cannot receive a topic reading. When an anaphor *nun*-P occurs in the left periphery, it cannot receive a topic reading, either.

(96) a. *jasin<sub>i</sub>-ul John<sub>i</sub>-i e<sub>i</sub> midu*

self-ACC John-NOM believe

'John believes himself.'

b. A: *jasin-ul noo-ga midnun-dagu*

self-ACC who-NOM believe-said

'Who did you say believes himself?

B: *#jasin<sub>i</sub>-un John<sub>i</sub>-i e<sub>i</sub> midu*

self-NUN John-NOM believe

\*'As for John, he believes himself.'

In (96a), the anaphor object *jasinul* reconstructs in the base position, and it is bound by *John*. In B's answer in (96b), on the other hand, the anaphor *nun*-P cannot be interpreted as a topic, showing that the topic *nun*-P cannot be reconstructed.

Pronouns in the *nun*-Ps that receive topic readings cannot be bound by operators.

(97) a. *jasinui<sub>i</sub> umuni-lul modun ai<sub>i</sub>-ga saranghe*

self's mother-ACC every child-NOM love

'Every child loves their mother.'

b. A: jasinui umuni-ran utun jonje-ya

self's mother what-like being-is

‘As for her/his own mother, how do you define her?’

B: #jasinui<sub>i</sub> umuni-nun modun ai<sub>i</sub>-ga saranghe

self's mother-NUN every child-NOM love

\*‘As for her/his own mother, every child loves her.’

In (97b), the *nun*-P *jasinui umuni-nun* cannot be interpreted as the topic of the sentence.

The operator of *modu* cannot bind *jasinui* in the *nun*-P that receives a topic reading.

Topic *nun*-Ps do not show Principle C-effects:

(98) A: Peter-ga ubune ajoo joun nonmon-ul sussy

Peter-NOM this-time very good article-ACC wrote

‘Peter wrote a very good article this time.’

B: Peter<sub>i</sub>-ga su-n gu nonmun-un gu<sub>i</sub>-ga LI-e balpyoha-go sipuhe

Peter-NOM wrote-that that article-NUN he-NOM LI-in publish-to want

‘As for the new article by Peter<sub>1</sub>, he<sub>1</sub> wants to publish it in LI.’

In B’s speech, the R-expression *Peter* can be co-indexed with the pronoun *gu* only when the *nun*-P receives a topic reading. The *nun*-P *se nonmun-un* cannot be interpreted as a contrastive focus.

(99) A: Peter-ga ubune joun nonmon-ul se pyun sussu

Peter-NOM this-time good article-ACC three pieces wrote

‘Peter wrote three good articles this time.’

B: #Peter<sub>i</sub>-ga ibun joo-e su-n nonmun-un, gu<sub>i</sub>-ga LI-e e<sub>i</sub>

Peter-NOM this week-in wrote-that article-NUN he-NOM LI-in

balpyoha-go sipuhe

publish-to want

‘As for the article which Peter wrote this week, he wants to publish it in LI.’

\*‘The article which Peter wrote this week, he wants to publish in LI (but not the other articles.)’

Topic *nun*-Ps do not show reconstruction phenomena and Principle C-effects, and this indicates that topic *nun*-Ps do not move.

Topic *nun*-Ps are not subject to Weak Crossover (WCO) effects, which have been used as a diagnostic method for movement. A phrase cannot move across another phrase with a co-indexed pronoun.

(100) A: John-edege malhebwa

John-about tell

‘Tell me about John.’

B: John<sub>i</sub>-un gu<sub>i</sub>-ui sunsengnim-i hangsang e<sub>i</sub> chingchanhasihu

John-NUN his teacher-NOM always praise

‘As for John, his teacher always praises him.’

*John* has a co-index with the pronoun *guui* in the subject phrase, but this sentence is grammatical and the *nun*-P *John-un* can receive a topic reading, showing that the *nun*-P does not move.

As discussed in Chapter 3, WCO effects may be suppressed by clause-internal scrambling. In contrast to clause-internal scrambling, long-distance scrambling does not suppress WCO effects. If the *nun*-P underwent long-distance scrambling, the sentence should be ungrammatical because of WCO effects. However, topic *nun*-Ps do not show WCO effects in the following example:

(101) A: John-edege malhebwa

John-about tell

‘Tell me about John.’

B: John<sub>i</sub>-un gu<sub>i</sub>-ui sunsengnim-i Mary-ege [ e<sub>i</sub> joun hakseng-ira-go] malhessu

John-NUN his teacher-NOM Mary-DAT good student-is-that said

‘As for John, his teacher told Mary that he was a good student.’

The *nun*-P *John-un* receives a topic reading, and the *nun*-P is co-indexed with the pronoun in the subject clause and the empty category in the embedded clauses. *John-un* cannot receive a contrastive focus reading:

(102) A: i    ban-e    joun hakseng-i    upsu

          this class-in good student-NOM not-is

B: #John<sub>i</sub>-un gu<sub>i</sub>-ui sunsengnim-i Mary-ege [ e<sub>i</sub> joun hakseng-ira-go] malhessu

          John-NUN his teacher-NOM Mary-DAT good student-is-that said

Having the same index as the pronoun in the subject clause, the *nun*-P cannot be contrastive. Topic *nun*-Ps are not subject to WCO effects; therefore, topic *nun*-Ps do not move.

### 4.3 Topic *Nun*-Ps and Co-indexed *Pros*

In the examples above, merged *nun*-Ps in the left periphery receive topic readings. When *nun*-Ps are merged and there is an empty argument position in the VP, there must be some covert argument in the empty position. Korean is a pro-drop language, which avoids redundancy and omits a pronoun if the meaning is covered by another argument in the same sentence or by discourse.



- (103) a. Mary-ga [John<sub>i</sub>-i daranasda-nun sasil-ul] al-go *pro*<sub>i</sub> jabu-ru nagassda  
 Mary-NOM John-NOM ran-away-that fact-ACC know-and catch-to went-out
- b. Mary-ga [John<sub>i</sub>-i daranasda-nun sasil-ul] al-go **gu<sub>i</sub>-lul** jabu-ru nagassda  
 Mary-NOM John-NOM ran-away-that fact-ACC know-and he-ACC catch-to went-out
- ‘Mary found out the fact that John ran way, and she went out to catch him.’

The sentence (103a) is grammatical without an overt object in the right co-ordinate clause. *Johni* is the subject of the embedded clause in the left coordinate clause, and it does not move out of the right coordinate clause. *Johni* has a nominative case, but the empty pronoun cannot have a nominative case, and *Johni* is not subject to island effects.

When a noun is far from a co-indexed pronoun in a sentence, the pronoun can stay or be omitted without changing the grammaticality of the sentence. On the other hand, if a noun is close to a co-indexed argument, the acceptability is different:

- (104) a. John<sub>i</sub>-i begagopas-gitemune *pro*<sub>i</sub> pang-ul mugusda  
 John-NOM hungry-felt-because bread-ACC ate
- b. ?John<sub>i</sub>-i begagopas-gitemune **gu-ga<sub>i</sub>** pang-ul mugusda  
 John-NOM hungry-felt-because he-NOM bread-ACC ate
- ‘Because John felt hungry, he ate bread.’

(104a) is grammatical and acceptable without *guga*, but (104b) is degraded with a redundant pronoun because *Johni* is close to the co-indexed pronoun in (104b) and the

meaning of the pronoun is covered by the subject noun. The redundancy is more obvious than in the case where co-indexed arguments are far from each other.

The following sentences include *nun*-Ps, and they show the same tendency as above: if *nun*-Ps are far from co-indexed gaps, the grammaticality and acceptability are the same as in sentences with co-indexed pronouns or nouns:

- (105) a. *ne abuji-ga su-sin gu sosulchegi-un ne ai-ga ku-myun*  
 my father-NOM wrote-that the novel-NUN my child-NOM grow-up-when  
*kok ne ai-ege e<sub>i</sub> ilgujulgusida*  
 certainly my child-DAT read-will
- b. *ne abuji-ga susin gu sosulchegi-un ne ai-ga ku-myun*  
 my father-NOM wrote-that the novel-NUN my child-NOM grow-up-when  
*kok ne ai-ege **gu chegul** ilgujulgusida*  
 certainly my child-DAT that book-ACC read-will

‘As for the book that my father wrote, I will read it to my child when she grows up.’

There are two adjuncts and a dative phrase between the *nun*-P, *ne abujiga susin gu sosulcheg-un* ‘as for the book which my father wrote,’ and the gap in (105a). In (105b), the gap is filled with a co-indexed NP *gu chegul* and (105b) has the same meaning as (105a). Since the co-indexed NP is far from the antecedent, it is far less redundant. Each *nun*-P in both sentences receives a topic reading only.

If a *nun*-P is close to a co-indexed pronoun, the pronoun becomes redundant.

- (106) a. *gu namja-nun Mary-ga mannasda*  
           the man-NUN Mary-NOM met
- b. *?gu namja<sub>i</sub>-nun Mary-ga gulul<sub>i</sub> mannasda*  
           the man-NUN Mary-NOM him met
- ‘As for the man, Mary met him.’

(106a) does not have a redundant pronoun, and it is totally acceptable, but (106b) has the redundant pronoun *gulul* ‘him’ and is degraded. The contrast between (105) and (106) is comparable to the contrast between (103) and (104). Noticeably, the *nun*-Ps in (105) and (106b) receive only topic readings.

When a co-indexed pronoun is redundant, the sentence is less acceptable than a sentence that has a gap in an argument position. Although Korean, a pro-drop language, avoids redundancy, honorifics are repeatedly used to show respect for the listener or for the person who is talked about, and several honorifics may occur in sentences redundantly. In the following sentences, the honorific NP *gu bun-ul* in (b) is co-indexed with *nun*-P *Kimsunsengnim-un*, and (b) is as acceptable as (a).

(107) a. Kimsunsengnim-un Mary-ga jajoo chajaboiusda

Mr.Kim-NUN Mary-NOM often visited(honorific)

b. Kimsunsengnim<sub>i</sub>-un Mary-ga gu bun<sub>i</sub>-ul jajoo

Mr.Kim-NUN Mary-NOM that person(honorific)-ACC often

chajaboiusda

visited(honorific)

‘As for Mr. Kim, Mary visited him often’

The co-indexed NP in (107b) is an honorific, so the redundancy is acceptable. The *nun*-P in (107b) receives a topic reading only, though (107a) may receive a topic reading and a contrastive focus reading without the redundant NP in an argument position.

All the *nun*-Ps with co-indexed NPs receive topic readings only, and they cannot receive contrastive focus readings. Merged *nun*-Ps may have co-indexed NPs in argument positions, whereas moved *nun*-Ps cannot. The redundant pronoun is dropped in (106a), as represented in the following example:

(108) gu namja-nun Mary-ga *pro* mannasda

the man-NUN Mary-NOM him met

‘As for the man, Mary met him.’

The object pronoun *gu-lul* between the subject *Mary-ga* and the verb *mannasda* is dropped because of the *nun*-P *gu namja-nun* ‘the man,’ which indicate the same person,

and the object is redundant. The covert argument *pro* occupies the object position. The *nun*-P does not move out of an argument position, but it is merged in order to achieve topichood.

#### 4.4 Derivation of Topic *Nun*-Ps

The topichood of merged phrases in the left periphery and co-indexed pronouns with merged phrases are also observed in Italian, German, and English. LDs in Italian, English, and German merge without movement and have topichood. Japanese *wa*-Ps also merge in the left periphery and receive topic readings. Korean *nun*-Ps may receive topic readings or contrastive focus readings, but only topic *nun*-Ps are parallel to the LDs, which merge and receive topic readings. I contend that all merged *nun*-Ps receive topic readings and suggest the following structure for topic *nun*-Ps:

(109) [<sub>ForceP</sub> Force [<sub>TopP</sub> Top ... [<sub>TP</sub> ....

Based on the structure (109), the sentences in (106) have the following structure:

- (110) a. [<sub>TopP</sub> gu namja-nun<sub>[top]</sub> [<sub>TP</sub> Mary-ga *pro* mannasda]]  
       b. [<sub>TopP</sub> gu namja-nun<sub>[top]</sub> [<sub>TP</sub> Mary-ga *gulul* mannasda]]

The topic *nun*-P *gu namja-nun* merges in TopP and the [top] feature is checked. The *nun*-P is co-indexed with the *pro* as in (110a) or the pronoun as in (110b), but there is no operator-variable relationship between the *nun*-P and the *pro*/pronoun.

In the left periphery, the topic field is projected immediately below ForceP and higher than the focus field, and the topic is closely related to the discourse. [top] represents the topichood of a referent, and the topichood is the pragmatic relation to the communicative setting (Lambrecht 1994). I assume that TopP includes discourse features that can be checked in spec-head relations with elements closely related to the discourse rather than with the sentence internal elements. [top] cannot be checked in the following example because the *wh*-phrase does not include [top]:

(111) \*[<sub>TopP</sub> *udie-nun* [<sub>TP</sub> *niga gabwassu*]]<sup>23</sup>

where-NUN you-NOM have-been

‘Where have you been?’

There is neither a topic operator nor any feature that causes movement from a lower position, which differs from the focus field, which includes focus operators that result in

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<sup>23</sup> *Udie-nun* ‘where’ can be interpreted as a contrastive focus in the following context:

- (i) A: *na suwool hago dongyung-e mot gabwassu*  
       I Seoul and Tokyo-to not have-been  
       ‘I haven’t been to Seoul and Tokyo.’  
    B: *udie-nun ni-ga gabwassu?*  
       where-NUN you-NOM have-been  
       ‘Where have you been (other than to Seoul and Tokyo)?’

movement. For example, (112) is not acceptable with the *nun*-P that scrambles to the leftmost position:

(112) \*<sub>[TopP jasinui<sub>i</sub> umuni-nun [TP modun ai<sub>i</sub>-ga t saranghe]]</sub>

self's mother-NUN every child-NOM love

\*‘As for her/his own mother, every child loves her.’

Since  $\text{Top}^0$  does not have an uninterpretable operator feature,  $\text{Top}^0$  cannot attract a phrase from a lower position. The scrambled *nun*-P *jasinui umuni-nun* is not merged without movement because it must be reconstructed to the object position to be bound by the antecedent *modun aiga*. Movement is a necessary condition for reconstruction.

So far, we have seen merging argument *nun*-Ps and the non-argument generic *nun*-Ps in the left periphery without movement. Now, I examine the possibility of adjunct *nun*-P movement. If [top] is checked in TopP, it may be assumed that [top] is checked by merging or moving a phrase in TopP. For example, if TopP has a kind of case feature and it must be checked in a spec-head relationship, a phrase might move to check the case feature from a lower position in the sentence. In particular, nominative and accusative case features are not checked by adjuncts, and thus if TopP includes a case feature, an adjunct might move to check the case feature. If that is the case, *nun*-marked adjuncts might move to check the case feature in Korean. However, there is no evidence that adjunct *nun*-Ps move and receive topic readings, as discussed in 2.5.4. (56) is repeated in the following:

(113) A: *jinan ilyoil-e mosun-il-i issusu*

last Sunday-on what-event-NOM was

‘What happened last Sunday?’

B: *jihnan ilyoil-e-nun John-i Namsan-e sanbool-i nasda-go*

last Sunday-on-NUN John-NOM Namsan-in wild-fire-NOM occurred-that

*malhessu*

said

‘Speaking of last Sunday, John said last Sunday that there had been a wild fire in

Namsan.’

\*‘Speaking of last Sunday, John said that there had been a wild fire in Namsan

last Sunday.’

The *nun*-marked PP *jinan ilyoile-nun* ‘last Sunday’ modifies the root clause, but it cannot modify the embedded clause. Since there is no island in B’s answer, there is nothing to block the *nun*-P movement from the embedded clause to the root clause. Therefore, the adjunct *nun*-P that can modify only the root clause does not move out of the embedded clause but merges in TopP, receiving a topic reading.

So far, I have discussed merged topic *nun*-Ps. Topic *nun*-Ps do not move but merge in TopP. However, *nun*-Ps may receive topic readings or contrastive readings, resulting in ambiguity, as discussed early in this chapter. A *nun*-P merges in the left periphery, receiving a topic reading. In the next chapter, I will discuss the movement of



contrastive focus *nun*-Ps and the reason for the resulting ambiguity of *nun*-Ps in the left periphery.

## Chapter 5: Contrastive Focus and Move

In this chapter, I discuss the movement of contrastive focus *nun*-Ps. As shown in Chapter 4, topic *nun*-Ps merge in the left periphery without movement, and merged *nun*-Ps do not receive contrastive focus readings. As discussed in 2.5.3, phrases move to the left in order to receive contrastive focus readings in several languages such as German (Moltman 1990, Choi 1999), Russian (Van Gelden 2003), Hungarian (É. Kiss 1995, 1998a, 1998b, Horvath 2000), Italian (Rizzi 1997, Benincá and Poletto 2004), Japanese (Saito 1985, 1992, 2010), and Gungbe (Aboh 2006).

Free-order languages share the characteristic of scrambling, and scrambling focus phrases results in contrast (Choi 1999). I argue that contrastive focus *nun*-Ps scramble to the left based on the diagnostic tests of *nun*-P movement, and the contrastive focus *nun*-Ps eventually move to the focus projections. I compare moved *nun*-Ps with scrambled phrases in Hindi to show that *nun*-Ps scramble to the left. Focus movement is operator-driven, and focus phrases must bind variables after movement (Rizzi 1997, Benincá and Poletto 2004, Horvath 2007). I argue that a focus operator moves to FocP to check the focus feature in Korean, suggesting the derivation of the contrastive focus *nun*-P structure.

### 5.1 *Nun*-Ps in the Left Periphery

In Chapter 4, I argued that merged *nun*-Ps in the left periphery receive only topic readings. However, a sentence may be ambiguous with a *nun*-P in the left periphery: a

*nun*-P may receive a topic reading or a contrastive focus reading, as discussed in 4.1.

Note the readings of the following sentences:

(114) a. A: *yuksa cheg-i udie issu*

history book-NOM where is

‘Where is the book?’

B: *yuksa cheg-un Mary-ga takja uie noasu*

history book-NUN Mary-NOM table on put

‘As for the history book, Mary put it on the table.’

#‘Mary put the the history book on the table (but she took the rest of the books.)’

b. A: *Mary-ga ne cheg-ul modu gajugassu*

Mary-NOM my book-ACC all took

‘Mary took all of my books.’

B: *yuksa cheg-un Mary-ga takja uie noassu*

history book-NUN Mary-NOM table on put

#‘As for the history book, Mary put it on the table.’

‘Mary put the history book on the table (and she took the rest of the books.)’

*Yuksa cheg-un* in (114) can receive a topic reading as in (114a) or a contrastive focus reading as in (114b), which results in an ambiguous sentence if there is no contextual

information. If *nun*-Ps merge, they receive only a topic reading, as we saw in the previous chapter, and there is a co-indexed *pro* in an empty argument position:

- (115) *yuksa cheg<sub>i</sub>-un Mary-ga takja uie pro<sub>i</sub> noasu*  
 history book-NUN Mary-NOM table on put  
 ‘As for the history book, Mary put it on the table.’

These merged *nun*-Ps receive topic readings with a co-indexed *pro* in the argument position. Since two interpretations of a *nun*-P are possible in the examples in (114), we may assume that the examples have two structures: one with a merged *nun*-P and the other with a moved *nun*-P.

As I discussed in Chapter 2, Choi (1995), Choi (1997, 1999), and Han (1998) argue for *nun*-P movement; Choi (1997, 1999), in particular, argues that scrambled *nun*-Ps receive only contrastive readings. Following Choi, I argue that *nun*-Ps can be scrambled. The *nun*-P *yuksa cheg-un* in (114b) moves to the left, leaving a copy:

- (116) *yuksa cheg<sub>i</sub>-un Mary-ga takja uie t<sub>i</sub> noassu*  
 history book-NUN Mary-NOM table on put  
 ‘Mary put the history book on the table (and she took the rest of the books.)’

The *nun*-P scrambles to the left periphery and receives a contrastive focus reading. The *nun*-P in (114) may receive two possible readings because there are two possible *nun*-P structures: the merged *nun*-P structure and the moved *nun*-P structure.

## 5.2 Move and Contrastive Focus *Nun*-Ps

In this section, using diagnostic methods for movement, I will show that contrastive focus *nun*-Ps move. As we saw in 4.2, *nun*-Ps in the left periphery can be co-indexed with an empty category in a complex NP, and they receive only topic readings and cannot receive contrastive readings. The examples in 4.2 are rewritten here:

(117) a. A: nu gu hakseng ani

you that student know

‘Do you know the student?’

B: gu haksengi-un ne-ga [[*pro*<sub>i</sub> cha-ro chi-go domangga-n] saram-ul]

that student-NUN I-NOM car-by hit-and ran-that man-ACC

chajanessu

found

‘As for the student, I found the man who had run him over with a car and had run away.’

\*‘The student, I found the man who had run him over with a car and had run away (but I don’t know the other students.)’

b. A: nu i-gyosil amoodo moru-ji

you this-class anybody not-know-right

‘You don’t know anybody in this class, do you?’

B: \*i hakseng<sub>i</sub>-un ne-ga [[ t<sub>i</sub> cha-ro chi-go domangga-n] saram-ul]

this student-NUN I-NOM car-by hit-and ran-that man-ACC

chajanessu

found

\*‘The student, I found the man who had run him over with a car and had run away (but I don’t know the other students.)’

In this sentence, the *nun*-P *gu hakseng-un* is co-indexed with the empty category in the complex NP that is delimited by the square brackets, and it cannot receive a contrastive focus reading. The same grammaticality is observed when the empty category is replaced with a pronoun:

(118) A: nu i-gyosil amoodo moru-ji

you this-class anybody not-know-right

‘You don’t know anybody in this class, do you?’

B: #i haksengi-un ne-ga [[gulul<sub>i</sub> cha-ro chi-go domangga-n] saram-ul]

this student-<sub>NUN</sub> I-<sub>NOM</sub> him car-by hit-and ran-that man-<sub>ACC</sub>

chajanessu

found

‘As for the student, I found the man who had run him over with a car and had run away.’

\*‘The student, I found the man who had run him over with a car and had run away (but I don’t know the other students.)’

*Gu hakseng-un* in the left periphery of B’s answer cannot receive a contrastive focus reading with a co-indexed pronoun, as in the sentence with an empty category that has the same index as a *nun*-P. These examples show Complex NP Constraint (CNPC) violation of contrastive focus *nun*-Ps that move out of a complex NP (DP). Contrastive focus *nun*-Ps are subject to the adjunct island constraint. *Nun*-Ps cannot co-occur with a co-indexed empty category in an adjunct phrase:

(119) A: *unu gisa-edehē Mary-ga hanguihessu*

which article-about Mary-NOM complained

‘Which article was Mary complaining about?’

B: \**gu gisa<sub>i</sub>-nun Mary-ga t<sub>i</sub> sasil-i anigi temune gu cholpansa-e*

that article-NUN Mary-NOM fact-NOM not-be because that publisher-to

*hanguihessu*

complained

\*‘The article, Mary complained to the publisher because it was not true (but the other article, she believed it was true).’

*Gu gisa-nun* is co-indexed with the empty category in the adjunct phrase, and it cannot receive a contrastive focus reading.

Contrastive focus *nun*-Ps are subject to reconstruction. Contrastive focus *nun*-Ps, including anaphors, are reconstructed, and the anaphors are bound by their antecedents.

(120) A: *John-un amoo gisa-do an-ilgu*

John-NUN any article-even not-read

‘As for John, he reads no article.’

B: *jasin<sub>i</sub>-ui gisa-nun John<sub>i</sub>-i t<sub>i</sub> ilgu*

self-GEN article-NUN John-NOM read

‘The article written by himself, John reads (but he reads nothing else).’



The anaphor *jasin* has the same index as *John*, and this sentence receives only a contrastive focus reading. When an anaphor *nun*-P occurs in the left periphery, it also receives only a contrastive focus reading.

(121) A: John-un amoo-do an-midu  
 John-NUN anybody-even not-believe

‘As for John, he believes nobody.’

B: jasin<sub>i</sub>-un John<sub>i</sub>-i t<sub>i</sub> midu  
 self-NUN John-NOM believe

‘Himself, John believes (but he believes no one else).’

The anaphor *nun*-P *jasin-un* reconstructs in the base position, and it is bound by *John*, showing that the *nun*-P moves from the object position to the leftmost position. The anaphor *nun*-P only receives a contrastive focus reading.

Pronouns in the *nun*-Ps that receive only contrastive focus readings can be bound by operators.

(122) A: modoo-ga da sarangha-nun saram-un upsu

everyone-NOM all love-that person-NUN not-exist

‘There is no one that everybody loves.’

B: jasinui<sub>i</sub> umuni-nun modun ai<sub>i</sub>-ga t<sub>i</sub> saranghe

self’s mother-NUN every child-NOM love

‘Every child loves their mother (but they may not love other people).’

The *nun*-P *jasinui umuni-nun* is interpreted only as the contrastive focus. The operator of *modun* can bind *jasinui* in the *nun*-P that receives a contrastive focus reading.

Contrastive focus *nun*-Ps show Principle C-effects:

(123) A: Peter-ga ubune joun nonmon-ul se pyun sussu

Peter-NOM this-time good article-ACC three pieces wrote

‘Peter wrote three good articles this time.’

B: #Peter<sub>i</sub>-ga ibun joo-e su-n nonmun-un, gu<sub>i</sub>-ga LI-e t<sub>i</sub>

Peter-NOM this week-in wrote-that article-NUN he-NOM LI-in

balpyoha-go sipuhe

publish-to want

\*‘The article which Peter wrote this week, he wants to publish in LI (but not the other articles.)’

The R-expression *Peter* cannot be co-indexed with the pronoun *gu* when the *nun*-P *se nonmun-un* is interpreted as a contrastive focus. Contrastive focus *nun*-Ps show reconstruction phenomena and Principle C-effects, and this indicates that contrastive focus *nun*-Ps undergo movement.

As discussed in 3.2.3, a WCO effect is a diagnostic method for scrambling. If a phrase scrambles clause-internally or out of an infinite clause, a WCO effect is suppressed, but if a phrase scrambles out of a finite clause, the phrase is subject to a WCO effect. As in the case of clause-internal scrambling, a WCO effect is suppressed when a *nun*-P has a co-indexed empty category in the same clause:

(124) A: *unu hakseng-do choochun mot badas-de*

any student-even recommendation not receive-said

‘I heard no student received a recommendation.’

B: *gu haksengdul<sub>i</sub>-un gudul<sub>i</sub>-ui sunsengnim-i t<sub>i</sub> choochunhessu*

the students-<sub>NUN</sub> their teacher-<sub>NOM</sub> recommended

‘The students, their teacher recommended (but I don’t know about the rest).’

The *nun*-P *gu haksengdul-un* in the left periphery and the pronoun *gugul* can be co-indexed, receiving a contrastive focus reading and suppressing a WCO effect. This indicates that the contrastive focus *nun*-P may scramble clause-internally. On the other hand, the contrastive focus *nun*-P in the left periphery of the root clause shows a WCO

effect when the *nun*-P is co-indexed with an empty category in the lower finite clause, as in the case of long-distance scrambling:

(125) A: *unu hakseng-do choochun mot badas-de*

any student-even recommendation not receive-said

‘I heard no student received a recommendation.’

B: \**gu haksengdul<sub>i</sub>-un Mary-ga gudul<sub>i</sub>-ui sunsengnim-ege Bill-i t<sub>i</sub>*

*gu* students-NUN *Mary*-NOM *their* teacher-DAT *Bill*-NOM

*choochunhesda-go malhessu*

recommended-that said

\*‘The students, Mary told their teacher that Bill recommended them (but I don’t know about the rest).’

If the pronoun in the indirect object phrase is co-indexed with the *nun*-P in the left periphery of the matrix clause, the *nun*-P cannot receive a contrastive focus reading. This indicates that the contrastive focus *nun*-P shows a WCO effect, as in long-distance scrambling; that is, the contrastive focus *nun*-P may undergo long-distance scrambling.

As scrambling out of an infinite clause suppresses WCO effects, contrastive focus *nun*-Ps in the root clause may have a copy in an embedded infinite clause.

(126) A: *unu hakseng-do choochun mot badas-de*  
 any student-even recommendation not receive-said

‘I heard no student received a recommendation.’

B: *se haksengi-un Mary-ga gudul<sub>i</sub>-ui sunsengnim-ege t<sub>i</sub> choochunhagi-lul*  
 three student-NUN Mary-NOM their teacher-DAT recommend-to-ACC  
*gwunhessu*

advised

‘Three students, Mary advised their teacher to recommend them (but I don’t  
 know about the rest).’

The *nun*-P can be co-indexed with the pronoun and the sentence does not show a WCO effect, receiving a contrastive focus reading. This indicates that the contrastive focus *nun*-P may scramble out of the infinite clause.

Contrastive focus *nun*-Ps show island effects and reconstruction effects.

Contrastive focus *nun*-Ps and scrambled phrases show the same tendency related to WCO effects, indicating that contrastive focus *nun*-Ps scramble to the left.

### 5.3 Scrambling and *Nun*-P Distribution

In 2.5.3, I showed that moved elements receive contrastive focus readings in fixed word-order languages and free word-order languages. Free word-order languages allow scrambling, which enables a sentence to have various surface orders without changing the

meaning (Bailyn 2002). Scrambling is divided into three types: short scrambling, which is movement in the VP; intermediate scrambling, which is movement to a VP-external position; and long-distance scrambling, which is a case in which a phrase occurs on the left of a CP boundary (Erteschik-Shir 2007, Takano 1998). Hindi shows all three types of scrambling:

(127) Nur-ne Anjum-ko kitaab di-i

Nur-Erg Anjum-Dat book.f give-Pfv.f

‘Nur gave Anjum a book.’

a. Short Scrambling:

Nur-ne *kitaab* Anjum-ko di-i

Nur-Erg book.f Anjum-Dat give-Pfv.f

b. Intermediate Scrambling:

*Anjum-ko* Nur-ne kitaab di-i

Anjum-Dat Nur-Erg book.f give-Pfv.f

c. Long-distance Scrambling

Yusuf *Anjum-ko<sub>i</sub>* soch-taa hai [ki Nur-ne *t<sub>i</sub>* kitaab di-i]

Yusuf.m Anjum-Dat think-Hab.MSg be.Prs.Sg that Nur-Erg book.f give-Pfv.f

d. Long-distance Scrambling

*Anjum-ko<sub>i</sub>* Yusuf soch-taa hai [ki Nur-ne *t<sub>i</sub>* kitaab di-i]

Anjum-Dat Yusuf.m think-Hab.MSg be.Prs.Sg that Nur-Erg book.f give-Pfv.f

‘Anjum, Yusuf thinks that Nur gave a book to.’ (Bhatt 2003:1-2)

In (127a), the object *kitaab* moves to the left of the indirect object *Anjumko*. The object movement over the indirect object is a typical type of short scrambling. (127b) is an example of intermediate scrambling in which the indirect object moves over the subject. In (127c) and (127d), the indirect object *Anjumko* moves out of the embedded CP. Both (127c) and (127d) are examples of long-distance scrambling.

Like Hindi, Korean is a free word-order language and exhibits all three types of scrambling:

(128) John-i Mary-ege gu cheg-ul juetda

John-NOM Mary-DAT that book-ACC gave

‘John gave Mary the book.’

a. Short Scrambling

John-i gu cheg<sub>i</sub>-ul Mary-ege t<sub>i</sub> juetda

John-NOM that book-ACC Mary-DAT gave

b. Intermediate Scrambling

gu cheg<sub>i</sub>-ul John-i Mary-ege t<sub>i</sub> juetda

that book-ACC John-NOM Mary-DAT gave

‘John gave Mary the book.’

c. Long Scrambling

John-i gu cheg<sub>i</sub>-ul [Bill-i Mary-ege t<sub>i</sub> juetda-go] sengakhanda  
 John-NOM that book-ACC Bill-NOM Mary-DAT gave-that think  
 gu cheg<sub>i</sub>-ul John-i [Bill-i Mary-ege t<sub>i</sub> juetda-go] sengakhanda  
 that book-ACC John-NOM Bill-NOM Mary-DAT gave-that think  
 ‘John thinks that Bill gave the book to Mary.’

In (128a), an example of short scrambling, the direct object *ge chegul* scrambles to the left of the indirect object *Maryege*. In (128b), the indirect object moves over the subject. In (128c), the indirect objects move out of the embedded clauses. *Nun*-Ps are distributed in the same positions as scrambled phrases in (128), and the *nun*-Ps that are not in the sentence initial position cannot receive topic readings:

- (129) John-i Mary-ege cheg-un juessu  
 John-NOM Mary-DAT book-NUN gave  
 ‘John gave Mary a book (and I don’t know about anything else).’  
 A: gu cheg-i udie issu  
 that book-NOM where is  
 ‘Where is the book?’



B: a. #John-i    gu    cheg-un    Mary-ege    juessu

John-NOM    that book-NUN    Mary-DAT    gave

\*‘As for the book, John gave it to Mary.’

‘John gave the book to Mary (but nothing else).’

b. gu    cheg-un    John-i    Mary-ege    juessu

that book-NUN    John-NOM    Mary-DAT    gave

‘As for the book, John gave it to Mary.’

‘John gave the book to Mary (but nothing else).’

c. #John-i    gu    cheg<sub>i</sub>-un    [Bill-i    Mary-ege    juetda-go]    sengakhe

John-NOM    that book-NUN    Bill-NOM    Mary-DAT    gave-that    think

‘John thinks that Bill gave Mary a book (and nothing else).’

d. gu    cheg<sub>i</sub>-un    John-i    [Bill-i    Mary-ege    juetda-go]    sengakhe

that book-NUN    John-NOM    Bill-NOM    Mary-DAT    gave-that    think

‘As for the book, John thinks that Bill gave it to Mary.’

‘John thinks that Bill gave Mary a book (and nothing else).’

Each *nun*-P in (129) is in the same position as the scrambled phrase in (128): the *nun*-P in (129a) corresponds to the short scrambled phrase in (128a), the *nun*-P in (129b) to the phrase scrambled intermediately in (128b), and the *nun*-Ps in (129c) to the phrases that undergo long-scrambling in (128c). Among B’s answers in (129), only the answers including leftmost *nun*-Ps can be appropriate in the dialogue in which *gu cheg-un* ‘the

book’ is the topic. In the following dialogue, on the other hand, all of B’s answers are appropriate, showing that each *nun*-P receives a contrastive focus reading:

(130) A: John-i Mary-ege amoogut-do an-jwussu

John-NOM Mary-DAT anything-even not-gave

‘John didn’t give anything to Mary.’

B: a. John-i gu cheg-un Mary-ege t<sub>i</sub> juessu

John-NOM that book-NUN Mary-DAT gave

b. gu cheg-un John-i Mary-ege t<sub>i</sub> juessu

that book-NUN John-NOM Mary-DAT gave

‘John gave the book to Mary (but nothing else).’

c. John-i gu cheg<sub>i</sub>-un [Bill-i Mary-ege t<sub>i</sub> juetda-go] sengakhe

John-NOM that book-NUN Bill-NOM Mary-DAT gave-that think

d. gu cheg<sub>i</sub>-un John-i [Bill-i Mary-ege t<sub>i</sub> juetda-go] sengakhe

that book-NUN John-NOM Bill-NOM Mary-DAT gave-that think

‘John thinks that Bill gave Mary a book (and nothing else).’

Since A says that John didn’t give anything to Mary, B’s answers, which indicate that John gave Mary the book, are contrastive: each *nun*-P *gu cheg-un* ‘the book’ receives a contrastive focus reading. The *nun*-Ps occur in exactly the same positions as the scrambled phrases above, meaning that *nun*-Ps scramble to the left. All *nun*-Ps receive contrastive focus readings, and only leftmost *nun*-Ps may receive topic readings. As

discussed in the previous sections, a *nun*-P in the leftmost position may be ambiguous because the *nun*-P may merge without movement and receive a topic reading, or the *nun*-P may move to the left, receiving a contrastive focus reading. As Choi (1997) argues, *nun*-Ps scramble left and receive contrastive focus readings.

Bhatt (2003) observes that in Hindi, scrambling an anaphor past the subject, an instance of intermediate scrambling, does not affect binding possibilities because scrambled phrases can reconstruct. This is also observed in Korean, as illustrated in the following examples:

(131) a. John<sub>i</sub>-i [jasin<sub>i</sub>-ui chingu-lul teryesda]

John-NOM self's friend-ACC hit

b. jasin<sub>i</sub>-ui chingu-lul [John<sub>i</sub>-i [t<sub>i</sub> teryesda]]

self's friend-ACC John-NOM hit

‘John hit his friend.’

(132) a. A: John jasin-ui chingu-edeh malhebwa

John self's friend-about tell

‘Tell me about John’s own friend.’

B: i. \*John<sub>i</sub>-i [[jasin<sub>i</sub>-ui chingu-nun] teryesda]

John-NOM self's friend-NUN hit

ii. \*[jasin<sub>i</sub>-ui chingu-nun] [John<sub>i</sub>-i [ t<sub>i</sub> teryesda]]

self's friend-NUN John-NOM hit

\*‘As for John’s friend, he hit her.’

‘John hit his friend (, Bill hit someone else ...)’

b. A: John-i amoo-do an-teryussu

John-NOM anyone-even not-hit

‘John didn’t hit anyone.’

B: i. John<sub>i</sub>-i [[jasin<sub>i</sub>-ui chingu-nun] teryesda]

John-NOM self's friend-NUN hit

ii. [jasin<sub>i</sub>-ui chingu-nun] [John<sub>i</sub>-i [ t<sub>i</sub> teryesda]]

self's friend-NUN John-NOM hit

\*‘As for John’s friend, he hit her.’

‘John hit his friend (, Bill hit someone else ...)’

In (131b), the scrambled object *jasinui chingulul* ‘his own friend’ is bound by the subject *John-i*, and in (132b), in the same way, the subject *John-i* binds the *nun-P jasinui chingu-nun* in the left periphery. Bhatt notes that scrambled phrases can reconstruct after

undergoing A'-movement. The scrambled argument *jasinui chingulul* in (131b) and the scrambled *nun*-P argument *jasinui chingu-nun* in (132b) must be reconstructed in a lower position than the subject in order to be bound by the subject. Only A'-moved arguments can be reconstructed in a lower position, so the *nun*-Ps in (132b) must be A'-moved. Noticeably, the scrambled *nun*-P in (132) only receives a contrastive focus reading, showing that B's answers in (132a) are not appropriate in the dialogue because the *nun*-P *jasinui chingu-nun* cannot receive a topic reading. The *nun*-P *jasinui chingu-nun* in (132b) is not merged but scrambled, and only scrambled *nun*-Ps receive a contrastive focus reading.

Bhatt also observes that long-distance-scrambled phrases must be reconstructed because a long-scrambled possessive anaphor can be bound by an argument on the right, as shown in the following example:

- (133) *jasin<sub>i</sub>/\*j-ui chingu-lul John<sub>i</sub>-i t' [Mary<sub>j</sub>-ga t sinroi<sub>i</sub>handa-go] sengakhanda*  
 self's friend-ACC John-NOM Mary-NOM trust-that think  
 'John thinks Mary trusts his friend/\*her friend.'

The anaphor *jasin* in the scrambled object *jasinui chingulul* may be bound by the subject of the main clause *John*, not by the embedded clause subject *Mary*. Therefore, *jasinui chingu* can be John's friend, not Mary's friend. The scrambled object must be reconstructed only in the position between the main clause subject *Johni* and the embedded clause subject *Maryga* to be bound by *John*. *Jasinui chingulul* cannot be

reconstructed in the embedded clause because it cannot be bound by *Mary*, the subject of the embedded clause. In the same way, the scrambled *nun*-P may have the same index as the subject of the matrix clause:

(134) A: Mary-nun amoo-do sinroiha-ji ana

Mary-NUN anyone-even trust-to not-is

‘Mary trusts nobody.’

B: jasin<sub>i</sub>/\*j-ui chingu-nun John<sub>i</sub>-i t’ [Mary<sub>j</sub>-ga t sinroiha<sub>j</sub>-go] sengakhe

self’s friend-NUN John-NOM Mary-NOM trust-that think

\*‘As for John’s friend, he thinks Mary trusts her.’

‘John thinks Mary trusts his friend(, and Bill trusts someone else...)’

The possessive anaphor in the scrambled *nun*-P *jasinui chingu-nun* can also be bound by the matrix clause subject, not by the embedded clause subject. The scrambled *nun*-P object must be reconstructed only in the position between the matrix clause subject *Johni* and the embedded clause subject *Maryga* to be bound by *John*, not in the embedded clause. The long scrambled *nun*-P *jasinui chingu-nun* is in the left periphery, and it receives only contrastive focus readings. In summary, *nun*-Ps may scramble left, short-scramble, or long-scramble, and the scrambled *nun*-Ps receive only contrastive focus readings.

#### 5.4 Derivation of Contrastive Focus *Nun*-Ps

*Nun*-Ps scramble to the left, receiving contrastive focus readings. As shown in Chapter 2, the left periphery consists of TopP, which topic phrases may occupy, and FocP, which focus phrases, particularly contrastive foci, may occupy. A contrastive focus acts as an operator, moving into the specifier of a functional projection and binding a variable (É. Kiss 1998a, b, Rizzi 1997, Benincá and Poletto 2004, Horvath 2007). Horvath (2007) suggests the Exhaustive Identification Operator (EI-Op) for contrastive focus movement operation. She argues that there is an exhaustive identification (EI) operator and a clausal functional head  $EI^0$ , and the uninterpretable operator feature of  $EI^0$  enters into a matching relation with a phrase in its c-commanding domain.  $EI^0$  attracts a matching EI-Op phrase to Spec,EIP. She considers EIP for contrastive focus projection, which is included in the focus field and represented as FocP in this dissertation. Her EI operator is the contrastive focus operator that moves with contrastive focus phrases to FocP. Following Horvath, I assume that in Korean,  $Foc^0$  attract a matching focus operator phrase to Spec, FocP and a focus operator phrase moves to FocP to check an uninterpretable operator feature [foc] in spec-head relation in FocP, as in fixed word-order languages such as Hungarian and Italian (É. Kiss 1998a, b, Rizzi 1997, Benincá and Poletto 2004). Therefore, the structural configurations of B's answers in (128) are the following:

(135) a. John-i gu cheg-un Mary-ege t juessu

John-NOM that book-NUN Mary-DAT gave

[FocP [Op gu cheg-un]<sub>[foc]</sub> [TP John-i [Op gu cheg-un]<sub>[foc, phon]</sub> Mary-ege

[Op gu cheg-un]<sub>[foc, ~~phon~~]</sub> juessu]]

b. gu cheg-un John-i Mary-ege t juessu

that book-NUN John-NOM Mary-DAT gave

[FocP [Op gu cheg-un]<sub>[foc, phon]</sub> [TP John-i Mary-ege [Op gu cheg-un]<sub>[foc, ~~phon~~]</sub>

juessu]]

c. John-i gu cheg-un Bill-i Mary-ege t juetda-go sengakhe

John-NOM that book-NUN Bill-NOM Mary-DAT gave-that think

[FocP [Op gu cheg-un]<sub>[foc]</sub> [TP John-I [Op gu cheg-un]<sub>[foc, phon]</sub>

[ForceP Bill-i Mary-ege [Op gu cheg-un]<sub>[foc, ~~phon~~]</sub> juetda-go] sengakhe]]

d. cheg-un John-i Bill-i Mary-ege t juetda-go sengakhe

book-NUN John-NOM Bill-NOM Mary-DAT gave-that think

[FocP [Op gu cheg-un]<sub>[foc, phon]</sub> [TP John-i [ForceP Bill-i Mary-ege

[Op gu cheg-un]<sub>[foc, ~~phon~~]</sub> juetda-go] sengakhe]

Scrambling is semantically vacuous but overt, so the phonetic features [phon] of scrambled phrases are retained at the landing sites (Saito 2003, 2005, 2010). In (135a) and (135c), *nun*-Ps scramble to the left, and [phon] is retained at the landing sites. The operator that contains [foc] triggers further movement to the FocP, and [foc] is checked



with the head of FocP. On the other hand, the *nun*-Ps in (135b) and (135d) scramble to FocP, in which [phon] is retained and [foc] is checked.

Foc<sup>0</sup> attracts a focus operator phrase. Non-operator phrases cannot occupy FocP. (136) is not grammatical because the *nun*-Ps are not focus operator phrases that have to move to check operator features.

(136) a. \*[<sub>FocP</sub> gwail-un [<sub>TP</sub> sagwa-ga masisji]]

fruit-NUN apple-NOM tasty-is

\*‘Speaking of fruits, apples are tasty (and speaking of vegetable, tomatos are tasty).’

b. \*[<sub>FocP</sub> gu namja<sub>i</sub>-nun [<sub>TP</sub> Mary-ga gulul<sub>i</sub> mannasda]]

the man-NUN Mary-NOM him met

\*‘Mary met the man (and no one else).’<sup>24</sup>

The *nun*-Ps merge in FocPs without movement from TPs. The *nun*-Ps are not operator phrases, and the contrastive focus operator feature [foc] cannot be checked in FocP in each sentence.

Scrambling is an overt movement, but the contrastive focus operator is a null operator and null operator phrases may move covertly. In light of this, how can we say that *nun*-Ps move further to FocP after they scramble, even though the movement may

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<sup>24</sup> Both sentences are grammatical if the *nun*-Ps are interpreted as topics. The *nun*-Ps cannot be contrastive foci.

not be overtly observed? In order to see null focus operator movement, we can look at the effect of *wh*-operator movement. *Wh*-movement is operator-driven in Korean (Beck and Kim 1997, Cheng and Rooryck 2000, Simpson 2003), and contrastive focus movement is also operator-driven. The operators have a chain relationship with their copies after movement, and therefore, locality effects are expected in the following examples:<sup>25</sup>

(137) A: John-i noogoonga-lul teryussu

John-NOM somebody-ACC hit

‘John hit somebody.’

B: a. John-un noogoo-lul teryusni

John-NUN who-ACC hit

‘As for John, who did he hit?’

\*‘Who did John hit (and who did Bill hit)?’

b. \*noogoo-lul John-un teryusni

who-ACC John-NUN hit

\*‘As for John, who did he hit?’

\*‘Who did John hit (and who did Bill hit)?’

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<sup>25</sup> Rizzi 2004b defines locality effects as the following (Rizzi 2004b: 225):

- (a) Y is in a Minimal configuration (MC) with X if there is no Z such that
  - i. Z is of the same structural type as X, and
  - ii. Z intervenes between X and Y.
- (b) “Same structural type” = (i) head or Spec and, in the latter class, (ii) A or A’
- (c) Z intervenes between X and Y iff Z c-commands Y and Z does not c-command X.

c. John-un noo-ga teryusni

John-NUN who-NOM hit

‘As for John, who hit him?’

\*‘Who hit John hit (and who did Bill hit)?’

d. \*nooga John-un teryusni

who-NOM John-NUN hit

\*‘As for John, who hit him?’

\*‘Who hit John hit (and who did Bill hit)?’<sup>26</sup>

In this dialogue, John is the topic and only (137a) and (137b) in B’s questions are appropriate with the *nun*-P in the leftmost position. The *nun*-P *John-un* only receives a topic reading, and therefore, all of B’s questions in the following examples are not appropriate because John is contrastive in this context:

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<sup>26</sup> Five informants were asked to judge the grammaticality of each sentence, and all of them said that (a), (b), and (d) could not receive contrastive focus readings. Three informants said that (c) might receive a contrastive reading, if an accent is put on the *nun*-P. They said that the accent on *nun*-P need not be strong. When a strong accent is put on a grammatical marker, the phrase including the marker becomes contrastive, as discussed in Chapter 2. However, the judgment of the informants shows asymmetry between subject *nun*-Ps and object *nun*-Ps, representing the preference for object *nun*-Ps over subject *nun*-Ps on the left of a *wh*-phrase. The subject-object asymmetry with prosodic effects is outside the scope of this dissertation, though the relation between prosodic effects and the grammatical roles of *nun*-Ps should be discussed in other studies.

(138) A: *bangung Mary-ga Bill-ul simhage teryus-de*

*just-now Mary-NOM Bill-ACC terribly hit*

‘I heard that Mary hit Bill hard a moment ago.’

B: a. *#John-un noogoo-lul teryusni*

*John-NUN who-ACC hit*

‘As for John, who did he hit?’

\*‘Who did John hit (and who did Bill hit)?’

b. *\*noogoo-lul John-un teryusni*

*who-ACC John-NUN hit*

\*‘As for John, who did he hit?’

\*‘Who did John hit (and who did Bill hit)?’

c. *#John-un noo-ga teryusni*

*John-NUN who-NOM hit*

‘As for John, who hit him?’

\*‘Who hit John hit (and who did Bill hit)?’

d. *\*nooga John-un teryusni*

*who-NOM John-NUN hit*

\*‘As for John, who hit him?’

\*‘Who hit John hit (and who did Bill hit)?’

In (138a) and (138c), the *nun*-P *John-un* precedes the *wh*-phrase *noogoolul*, and the *nun*-P receives only a topic reading. (138b) and (138d), in which the *nun*-P is preceded by a

*wh*-phrase, are ungrammatical. Each sentence includes a *wh*-word and a *nun*-P and receives no contrastive focus reading. The *wh*-operator and the contrastive focus operator move to the left, and they are in a chain relationship with their copies in each sentence.

- (139) a. [<sub>ForceP</sub> [Op noogoo-lul]<sub>[wh]</sub> [<sub>FocP</sub> [Op John-un]<sub>[foc]</sub>  
           [TP [Op John-un]<sub>[foc, phon]</sub> [Op noogoo-lul]<sub>[wh, phon]</sub> teryusni]]]  
       b. [<sub>ForceP</sub> [Op noogoo-lul]<sub>[wh, phon]</sub> [<sub>FocP</sub> [Op John-un]<sub>[foc]</sub>  
           [TP [Op John-un]<sub>[foc, phon]</sub> [Op noogoo-lul]<sub>[wh, phon]</sub> teryusni]]]  
       c. [<sub>ForceP</sub> [Op<sub>[wh]</sub> noo-ga<sub>[phon]</sub>] [<sub>FocP</sub> [Op<sub>[foc]</sub> John-un<sub>[phon]</sub>]  
           [TP [Op John-un]<sub>[foc, phon]</sub> [Op<sub>[wh]</sub> noo-ga<sub>[phon]</sub>] teryusni]]]  
       d. [<sub>ForceP</sub> [Op noo-ga]<sub>[wh, phon]</sub> [<sub>FocP</sub> [Op John-un]<sub>[foc]</sub>  
           [TP [Op John-un]<sub>[foc, phon]</sub> [Op noo-ga]<sub>[wh, phon]</sub> teryusni]]]

In all the structures, the focus operator intervenes between the *wh*-operator and its copy, and the *nun*-Ps cannot be focalized because of locality effects. The locality effects are also observed in relative clauses. In the following examples, including islands for movement, no *nun*-P moves out of the island, but only the sentence with a relative clause is ungrammatical:

- (140) a. \*ne-ga [[gu hakseng-un cha-ro chi-go domangga-n] saram-ul] chajanesda  
           I-NOM that student-NUN car-by hit-and ran-that man-ACC found  
           ‘I found the man who had run the student over with a car and had run away.’

- b. Mary-ga [ gu gisa-nun sasil-i anigi temune] cholpansa-e hanguihesda  
 Mary-NOM that article-NUN true not-be because publisher-to complained  
 ‘Mary complained to the publisher because the article was not true (but she  
 believed the other article was true).

In (140a), the relative clause in the complex DP includes a *nun*-P, and the sentence is ungrammatical, whereas (140b) is grammatical even with an adjunct island that includes a *nun*-P. The only difference between the two sentences is that a null operator moves out of the relative clause in (140a), and (140b) does not have a relative clause operator. The relative operator moves from the TP to the ForceP of the relative clause, and the contrastive focus operator intervenes between the relative operator and its copy, showing a locality effect. With the examples that show locality effects resulting from the contrastive focus operator and other types of operators, we can see that the covert movement of a contrastive operator is observed in Korean.

Topic *nun*-Ps merge in TopP, and contrastive focus *nun*-Ps move to FocP. The structural configuration of a topic *nun*-P looks like the following:

- (141) a. gu hakseng-un [[ne-ga cha-ro chi-go domangga-n] saram-ul] chajanesda  
 that student-NUN I-NOM car-by hit-and ran-that man-ACC found  
 ‘As for the student, I found the man who had run him over with a car and had  
 run away.’  
 \*‘I found the man who had run the student over with a car and had run away  
 (but I don’t know about the other students).’  
 b. [<sub>TopP</sub> gu hakseng<sub>i</sub>-un<sub>[top]</sub> [<sub>TP</sub> ne-ga [<sub>DP</sub>[<sub>ForceP</sub> *pro*<sub>i</sub> cha-ro chi-go domangga-n]  
 saram-ul] chajanesda]]

The topic *nun*-P merges in TopP clause-externally, and the clause includes the subject *pro* that co-refers to the topic *nun*-P. There is no copy of the merged *nun*-P in the sentence; that is, there is no variable to be bound by the *nun*-P. This sentence cannot receive a contrastive focus reading since the *nun*-P cannot move out of the complex NP(DP):

- (142) \*<sub>[FocP</sub> gu hakseng<sub>i</sub>-un<sub>[foc, phon]</sub> [<sub>TP</sub> ne-ga [<sub>DP</sub>[<sub>ForceP</sub> gu hakseng<sub>i</sub>-un<sub>[foc, phon]</sub>  
 cha-ro chi-go domangga-n] saram-ul] chajanesda]]

Contrastive focus *nun*-Ps cannot move out of adjunct phrases. The structural configuration is in the following example:

- (143) a. *gu gisa<sub>i</sub>-nun Mary-ga e<sub>i</sub> sasil-i anigi temune cholpansa-e hanguihesda*  
 that article-NUN Mary-NOM true not-be because publisher-to complained  
 \*‘The article, Mary complained to the publisher because it was not true (but the  
 other article, she believed it was true).’
- b. \*[<sub>FocP</sub> *gu gisa<sub>i</sub>-nun*<sub>[foc, phon]</sub> [<sub>TP</sub> *Mary-ga* [<sub>AdvP</sub> *gu gisa<sub>i</sub>-nun*<sub>[foc, phon]</sub>  
*asil-i anigi temune]* *cholpansa-e hanguihesda*]]

Anaphor *nun*-Ps receive only contrastive focus readings, as discussed in 5.2. The structural configuration of an anaphor *nun*-P is the following:

- (144) a. *jasin<sub>i</sub>-ui umuni-nun modun ai-ga saranghanda*  
 self’s mother-NUN every child-NOM love  
 \*‘As for his own mother, every child loves her.’  
 ‘Every child loves their mother (but they may not love their siblings).’
- b. [<sub>FocP</sub> *jasin<sub>i</sub>-ui umuni-nun*<sub>[foc, phon]</sub> [<sub>TP</sub> *modun ai-ga*  
*jasin<sub>i</sub>-ui umuni-nun*<sub>[foc, phon]</sub> *saranghanda*]]

The contrastive focus *nun*-P *jasinui umuni-nun* moves to FocP and leaves a copy of itself in the base position. The contrastive focus *nun*-P reconstructs in the base position to make the anaphor *jasin* bound by the co-indexed phrase *modun ai* ‘every child.’

So far, I have discussed the derivational difference between topic *nun*-Ps and contrastive focus *nun*-Ps. Topic *nun*-Ps are merged in the left periphery, and contrastive



focus *nun*-Ps scramble left. In the next chapter, I will discuss the structural difference between topic *nun*-Ps and contrastive focus *nun*-Ps in multiple *nun*-P structures.

## **Chapter 6: The Structural Difference between Merged Topic and Moved Foci**

In this chapter, I will discuss the structural differences between topic *nun*-Ps and contrastive focus *nun*-Ps, focusing on multiple *nun*-P structures. *Nun*-Ps merge in TopP to get topichood, as shown in Chapter 4, and contrastive focus *nun*-Ps scramble to the left and land on FocP to check focus operator features, as shown in Chapter 5. The derivational and structural differences between topic *nun*-Ps and contrastive focus *nun*-Ps is clearly shown in multiple *nun*-P structures. I will discuss the order and the structural differences of topic *nun*-Ps and contrastive focus *nun*-Ps in multiple *nun*-P structures.

### **6.1 Ambiguity Resulting from Structural Differences**

In some constructions, a *nun*-P may receive a topic reading or a contrastive focus reading, and this leads to ambiguity. The ambiguity of such sentences can be argued to follow from the action of two derivations, Merge and Move, and from the structural difference. The sentence, which may receive a topic reading or a contrastive focus reading, can have two different structures; that is, the sentence can have different derivational histories:

(145) *gu cheg-un Mary-ga takja uie noasda*

the book-<sub>NUN</sub> Mary-<sub>NOM</sub> table on put

a. [<sub>TopP</sub> *gu cheg-un* [<sub>top</sub>] [<sub>TP</sub> *Mary-ga takja uie pro noasda*]]

‘As for the book, Mary put it on the table.’

b. [<sub>FocP</sub> *gu cheg-un* [<sub>foc, phon</sub>] [<sub>TP</sub> *Mary-ga takja uie gu cheg-un* [<sub>foc, phon</sub>] *noasda*]]

‘Mary put the book on the table.(And Tom took the pen with him,...)’<sup>27</sup>

The *nun*-P *gu cheg-un* ‘the book’ in (145a) is merged in TopP, and *pro* is in an argument position. The topic feature [top] is checked in the local relationship with the head of TopP. In (145b), on the contrary, the *nun*-P scrambles to the left and lands on FocP where [foc] is checked in the relationship with the head of FocP. The surface structures look the same,

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<sup>27</sup> The difference between *pro* and traces is that *pro* can be replaced with an overt pronoun but traces cannot. If a sentence has a scrambled phrase, the base position of the phrase cannot have an overt pronoun:

(i) Scrambling:

*John<sub>i</sub>-ul Mary-ga t<sub>i</sub> mannasda*  
*John-ACC Mary-NOM met*  
 \**John<sub>i</sub>-ul Mary-ga gu<sub>i</sub>-lul mannasda*  
*John-ACC Mary-NOM him-ACC met*  
 "Mary met John."

The base position of the scrambled object *Johnul* cannot be filled with a pronoun. On the other hand, a covert *pro* can be replaced with an overt pronoun:

(ii) Pro-drop:

*Mary-ga pro mannasda*  
*Mary-NOM met*  
*Mary-ga gu-lul/gunye-lul mannasda*  
*Mary-NOM him /her met*  
 "Mary met him/her."

This shows that *pro*, a covert pronoun, does not result from movement.

but the two different readings of the sentence are derived from two different derivations: merging in TopP and movement to FocP. We can see the structural difference in the following examples:

(146) gu gisa-nun John-i Mary-ga sesda-go sengakhanda

the article-NUN John-NOM Mary-NOM wrote-that think

a.[<sub>TopP</sub> gu gisa-nun<sub>[top]</sub> [<sub>TP</sub> John-i [<sub>ForceP</sub> Mary-ga *pro* sesda-go] sengakhanda]]

b.[<sub>TopP</sub> gu gisa-nun<sub>[top]</sub> [<sub>TP</sub> John-i [<sub>ForceP</sub> Mary-ga gu gisa-lul sesda-go] sengakhanda]]

‘As for the article, John thinks that Mary wrote it.’

\*‘John thinks that Mary wrote the article(, Bill wrote another article...)’

(146a) has *pro* in an argument position, and (146b) has an overt pronoun in the same position. *Pro* is not a trace of a moved element, so it can be replaced with an overt pronoun. With an overt object, (146b) only receives a topic reading. On the other hand, the *nun*-Ps of B’s sentences in the following examples receive only contrastive focus readings.

(147) a. A: John-i jasin-ui gisa-edege mwurago hessu

John-NOM self's article-about what said

‘What did John say about his own article?’

B: #jasin-ui gisa-nun John-i Mary-ga ilgusda-go hessu

self's article-NUN John-NOM Mary-NOM read-that said

[<sub>FocP</sub> jasin-ui gisa-nun]<sub>[foc, phon]</sub> [<sub>TP</sub> John-i jasin-ui gisa-nun]<sub>[foc, phon]</sub>

[<sub>ForceP</sub> Mary-ga jasin-ui gisa-nun]<sub>[foc, phon]</sub> [ilgusda-go] malhessu]]

\*‘As for John’s own article, he thinks that Mary read it.’

‘John thinks that Mary read his article (but nothing else.)’

b. A: John-i Mary-ga amoogut-do an-ilgusda-go hessu

John-NOM Mary-NOM nothing-even not-read-that said

‘John said that Mary read nothing.’

B: jasin-ui gisa-nun John-i Mary-ga ilgusda-go hessu

self's article-NUN John-NOM Mary-even read-that said

[<sub>FocP</sub> jasin-ui gisa-nun]<sub>[foc, phon]</sub> [<sub>TP</sub> John-i jasin-ui gisa-nun]<sub>[foc, phon]</sub>

[<sub>ForceP</sub> Mary-ga jasin-ui gisa-nun]<sub>[foc, phon]</sub> [ilgusda-go] sengakhe]]

\*‘As for John’s own article, he said that Mary read it.’

‘John thinks that Mary read his article (but nothing else.)’

In (147a), the topic is John’s own article. The *nun*-P *jasinui gisa-nun*, which includes an anaphor co-indexed with John, cannot receive a topic reading, and B’s answer is not appropriate in the dialogue. In (147b), A says that Mary didn’t read anything, but B says

Mary did read John's article. *Jasinui gisa-nun* only receives a contrastive focus reading. A reflexive pronoun *jasinui* must be reconstructed in a position to the right of the subject *Johni* in order to be bound by the subject in (147b). The reconstruction effect is used as a diagnostic of movement, as I discussed in Chapter 5, and the moved *nun*-P receives only a contrastive focus reading.

So far, we have seen topic *nun*-Ps associated with objects. In what follows, I discuss the different derivations associated with subjects. In contrast to *nun*-Ps that have the same index as objects but are not in object positions, *nun*-Ps with the same index as subjects are still in initial position with respect to their linear order. In the same way as *nun*-P objects, however, a scrambled *nun*-P subject gets a contrastive focus reading, and a merged *nun*-P, which is co-indexed with the subject *pro*, gets a topic reading. In the following examples, the *nun*-P *John-un* may receive a topic reading or a contrastive focus reading. I argue that the different readings result from the different derivations described in (148a) and (148b):

(148) John-un jikjep hoisa-lul unyunghanda

John-NUN directly company-ACC run

a. [<sub>TopP</sub> John-un<sub>[top]</sub> [<sub>TP</sub> *pro* jikjep hoisa-lul unyunghanda]

b. [<sub>FocP</sub> John-un<sub>[foc, phon]</sub> [<sub>TP</sub> John-un<sub>[foc, phon]</sub> jikjep hoisa-lul unyunghanda]

‘As for John, he runs a company by himself.’

‘John runs a company by himself (and Bill works in a company as an employee...)’

In (148a), *John-un*, which is co-indexed with the subject *pro*, merges in TopP, receiving a topic reading. On the other hand, *John-un* in (148b) scrambles to FocP and receives a contrastive focus reading. The following sentence has both a *nun-P John-un* and the subject *guga* ‘he’ and receives a topic reading only:

(149) [<sub>TopP</sub> John-un<sub>[top]</sub> [<sub>TP</sub> gu<sub>i</sub>-ga jikjep hoisa-lul unyunghanda]<sup>28</sup>

John-NUN he-NOM directly company-ACC run

‘As for John, he runs a company by himself.’

\*‘John runs a company by himself(, and Bill works in a company as an employee...)’

*John-un* is merged in TopP and cannot receive a contrastive focus reading because the *nun-P* does not move; it merges. There is no possibility that the *nun-P* moves to the left periphery since all the argument positions are filled in the sentence, and there is no gap. The following complex sentence has a *nun-P*, which is co-indexed with the subject *pro* or a copy of the subject in the embedded clause subject position:

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<sup>28</sup> Instead of *gu-ga* ‘he,’ *jasini* ‘self’ can occur as the subject. The sentence meaning is kept, though the subject is substituted with an anaphor. The *nun-P* gets a topic reading only.

(i) John-un jasin-i jikjep hoisa-lul unyunghanda  
 John-NUN self-NOM directly company-ACC run  
 ‘As for John, he runs a company by himself.’

This sentence shows the possibility that a higher *nun-P* binds the subject.

(150) Mary-nun sensengnim-i johun hakseng-ira-go malhesda

Mary-NUN teacher-NOM good student-be-that said

a. [TopP Mary-nun<sub>[top]</sub> [TP sensengnim-i [ForceP *pro* johun hakseng-ira-go] malhesda]]

b. [FocP Mary-nun<sub>[foc, phon]</sub> [TP sensengnim-i [ForceP Mary-nun<sub>[foc, phon]</sub> johun  
hakseng-ira-go] malhesda]]

‘As for Mary, the teacher said that she was a good student.’

‘The teacher said that Mary was a good student(, but he didn’t talk about the other students.)’

*Mary-nun* merges in TopP in (150a), and there is a *pro* in the subject position of the embedded ForceP. In (150b), the *nun*-P scrambles left, leaving a copy in the base position. The *pro* in (150a) can be replaced with an overt pronoun *gunyuga* ‘she.’ which is co-indexed with the merged *nun*-P *Mary-nun*.



(151) ?<sub>[TopP Mary-nun<sub>[top]</sub> [TP sensengnim-i [<sub>ForceP</sub> gunyu-ga johun hakseng-ira-go] malhesda]]</sub><sup>29</sup>

‘As for Mary, the teacher said that she was a good student.’

\*‘The teacher said that Mary was a good student (, but he didn’t say anything about the other students.)’

*Mary-nun* receives only a topic reading. Note that it cannot be scrambled from the subject position of the embedded clause because that position is already filled. The degraded grammaticality results from the redundant pronoun *gunyuga*, an issue that was discussed in Chapter 4. The *nun*-P is merged, with *pro* in an argument position.

In the next section, I continue the discussion of the positions that *nun*-Ps occupy.

## 6.2 The Structural Distribution of Multiple *Nun*-Ps

In arguing that a topic reading and a contrastive focus reading are generated in different ways, I asserted that the topic *nun*-Ps merge in TopP, which is higher than FocP, to which the contrastive focus *nun*-Ps move. As evidence of this, only the leftmost *nun*-P can get a topic reading in a sentence with multiple *nun*-Ps, as in the following example:

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<sup>29</sup> Three of five Korean native speakers said that this sentence was fine, and two of them said it was not good but it was possible to be said. The two Korean native speakers said that the pronoun *gunyu* ‘she’ seemed to refer to *sunsengnim* ‘teacher,’ not to *Mary*, when they heard the sentence for the first time. When I put a pause between *sunsengnimi* and *gunyuga*, all five said it was acceptable. Therefore, I add one question mark to the sentence.

(152) *gu namja-nun John-un mannasda*

the man-NUN John-NUN met

- a. ‘As for the man, he met John (and no one else).’
- b. ‘The man met John (and no one else) (and Bill met Sue ...)’
- c. \*‘As for John, the man met him (and Bill met Sue...)’

The interpretation in (152a) shows that *gu namja-nun* ‘the man’ receives a topic reading, but *John-un* receives a contrastive focus reading. (152b) shows that both *nun*-Ps receive contrastive focus readings. In the interpretation of (152c), *John-un* is the topic of the sentence, and *gu namja-nun* is a contrastive focus. Only *gu namja-nun* can receive a topic reading, preceding *John-un*. Possible derivations include the following:

(153) a. [<sub>TopP</sub> *gu namja-nun*<sub>[top]</sub> [<sub>FocP</sub> *John-un*<sub>[foc, phon]</sub> [<sub>TP</sub> *pro John-un*<sub>[foc, phon]</sub> *mannasda*]]]

‘As for the man, he met John (but not others).’

b. [<sub>FocP</sub> *gu namja-nun*<sub>[foc, phon]</sub> [<sub>FocP</sub> *John-un*<sub>[foc, phon]</sub> [<sub>TP</sub> *gu namja-nun*<sub>[foc, phon]</sub> *John-un*<sub>[foc, phon]</sub> *mannasda* ]]]

‘The man met John (but not others) (and Bill met Sue ...)’

In (153a), the *nun*-P *gu namja-nun* is merged in Spec,TopP and receives a topic reading. *John-un* in a base position only receives a contrastive focus reading. In (153b), both *nun*-Ps scramble to FocPs and receive contrastive focus readings. As Benincá and Poletto (2004) point out, multiple focus phrases may move to the focus field below the topic field

in the left periphery. Multiple contrastive *nun*-Ps in the left periphery show that FocP is recursive in Korean. I will turn now to look at the sentences with more than two *nun*-Ps. When more than two phrases are *nun*-marked, only the first *nun*-P receives a topic reading, and the first *nun*-P receives only a topic reading.

(154) *Mary-nun cheg-un John-ege-nun juesda.*

Many-NUN book-NUN John-to-NUN gave

‘As for Mary, she gave the book to John (not to others) (and the notebook to Bill...)’

Since only the first *nun*-P *Mary-nun* gets a topic reading, it is merged in Spec,TopP. *Cheg-un*, which scrambles to the left, has a contrastive focus reading, and *Johnege-nun* also receives a contrastive focus reading. The example above has the following structure:

(155) [<sub>TopP</sub> *Mary-nun*<sub>[top]</sub> [<sub>FocP</sub> *cheg-un*<sub>[foc, phon]</sub> [<sub>FocP</sub> *John-ege-nun*<sub>[foc, phon]</sub>

[<sub>TP</sub> *pro* *cheg-un*<sub>[foc, phon]</sub> *John-ege-nun*<sub>[foc, phon]</sub> *cheg-un*<sub>[foc, phon]</sub> *juesda*]]]]

*Mary-nun*, the first *nun*-P in the surface order, is merged in Spec,TopP, and *pro* is in the subject position. *Cheg-un* ‘book,’ the second *nun*-P, scrambles to the left of the third *nun*-P *Johnege-nun* and moves to FocP to check [foc]. The third *nun*-P *Johnege-nun* also moves to FocP. The merged *nun*-P *Mary-nun* receives a topic reading only, and the moved *nun*-Ps *cheg-un* and *Johnege-nun* get contrastive focus readings.

In the following examples, the subject is the pronoun *gunyuga* ‘she.’

(156) a. ?Mary<sub>i</sub>-nun gunyu<sub>i</sub>-ga cheg-un John-ege-NUN juesda.<sup>30</sup>

Many-NUN she-NOM book-NUN John-to-NUN gave

b. ?Mary<sub>i</sub>-nun cheg-un gunyu<sub>i</sub>-ga John-ege-NUN juesda.

Many-NUN book-NUN she-NOM John-to-NUN gave

‘As for Mary, she gave the book to John (not to others) (and the notebook to Bill...)

In (156a), the subject *gunyuga* occurs between *Mary-nun* and the *nun*-P object *cheg-un*, and in (156b), the subject is between *cheg-un* and the dative *nun*-marked object *Johnege-nun*. In both sentences, *Mary-nun* receives only a topic reading. In (156a), the object *cheg-un* scrambles over the dative object *Johnege-nun*, and in (156b) it is scrambled over the subject and the dative object. The scrambled *cheg-un* receives only a contrastive focus reading in both sentences. The examples have the following structure:

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<sup>30</sup> Two of five Korean native speakers said that these sentences were fine, one said that these sentences were not good but can be said, and two said that these sentences were not acceptable. When I put a pause between *Marynun* and *gunyuga*, all five said that these sentences were acceptable. Therefore, I add one question mark to each of the sentences.

- (157) a. [<sub>TopP</sub> Mary-nun<sub>[top]</sub> [<sub>FocP</sub> cheg-un<sub>[foc]</sub> [<sub>FocP</sub> John-ege-nun<sub>[foc]</sub>  
           [<sub>TP</sub> gunyu-ga cheg-un<sub>[foc, phon]</sub> John-ege-nun<sub>[foc, phon]</sub> cheg-un<sub>[foc, phon]</sub> juesda]]]]  
       b. [<sub>TopP</sub> Mary-nun<sub>[top]</sub> [<sub>FocP</sub> cheg-un<sub>[foc, phon]</sub> [<sub>FocP</sub> John-ege-nun<sub>[foc]</sub>  
           [<sub>TP</sub> gunyu-ga John-ege-nun<sub>[foc, phon]</sub> cheg-un<sub>[foc, phon]</sub> juesda]]]]]

In (157a), the first *nun*-P *Mary-nun* merges in TopP and the second *nun*-P *cheg-un* scrambles over the indirect object *John-ege-nun*. The second and the third *nun*-Ps land in FocPs to check [foc]. In (157b), the first *nun*-P also merges in TopP, and the second *nun*-P scrambles to FocP. The third *nun*-P eventually moves to FocP to check [foc].

Topic *nun*-Ps may have co-indexed pronouns in lower positions, whereas contrastive focus *nun*-Ps cannot. No other *nun*-Ps than the first *nun*-P in a clause can have a co-indexed pronoun.

- (158) \*Mary<sub>i</sub>-nun cheg<sub>j</sub>-un gunyu<sub>i</sub>-ga John-ege-NUN gugus<sub>j</sub>-ul juesda

Many<sub>-NUN</sub> book<sub>-NUN</sub> she<sub>-NOM</sub> John-to<sub>-NUN</sub> it<sub>-ACC</sub> gave

- \*[<sub>TopP</sub> Mary<sub>i</sub>-nun<sub>[top]</sub> [<sub>FocP</sub> cheg<sub>j</sub>-un<sub>[foc, phon]</sub> [<sub>FocP</sub> John-ege-nun<sub>[foc]</sub>

[<sub>TP</sub> gunyu<sub>i</sub>-ga John-ege-nun<sub>[foc, phon]</sub> gugus<sub>j</sub>-ul juesda]]]]]

‘As for Mary, she gave the book to John (not to others) (and the notebook to Bill...)’

The first pronoun can be co-indexed with the first *nun*-P, which receives only a topic reading. As discussed in 2.5.1, topic projections are not recursive (Benincá and Poletto 2004), and (158), which has the only topic *nun*-P, shows that TopP is not recursive in

Korean. On the other hand, no pronoun in an argument position can be co-indexed with any of the contrastive focus *nun*-Ps. With pronouns in argument positions, co-indexed *nun*-Ps cannot be moved out of the argument positions. This shows that contrastive focus *nun*-Ps cannot merge in FocP without movement. Furthermore, no more than one *nun*-P can occur with a complex NP.

(159) a. [<sub>TopP</sub> Mary-nun [<sub>TP</sub> Bill-i [<sub>DP</sub>[<sub>ForceP</sub> *pro* John-ege-nun cheg-UN juesda-nun]

Many-NUN      Bill-NOM                      John-to-NUN    book-NUN gave-that  
sasil-ul] anda]]  
fact-ACC know

b. \* [<sub>TopP</sub> Mary-nun [<sub>top</sub>] [<sub>FocP</sub> cheg-un [<sub>foc, phon</sub>] [<sub>TP</sub> Bill-i [<sub>DP</sub>[<sub>ForceP</sub> *pro* John-ege-NUN

Many-NUN                      book-NUN                      Bill-NOM                      John-to-NUN  
cheg-un [<sub>foc, phon</sub>] juesda-nun] sasil-ul] anda]]]  
gave-that    fact-ACC know

‘As for Mary, Bill knows the fact that she gave the book to John (not to others)  
(and the notebook to Bill...).’

In (159a), one *nun*-P is in the left periphery of the root clause, receiving only a topic reading, and the other *nun*-Ps are in the complex NP. In (159b), two *nun*-Ps are in the left periphery of the root clause, resulting in ungrammaticality. As discussed in Chapter 2 and Chapter 5, phrases cannot scramble out of DP islands. (159b) is not grammatical because

the contrastive focus *nun*-P *cheg-un* scrambles out of a DP island, and they cannot merge without movement in FocP in the root clause.

Only the *nun*-P in the leftmost position of a clause gets a topic reading when there are more than two *nun*-Ps in a sentence. In the following example, the *nun*-Ps other than the first one *cheg-un* cannot be interpreted as the topic.

(160) *cheg-un Mary-nun John-ege-nun juesda*

‘As for the book, Mary (but no one else) gave it to John (not to others)’

\*‘As for Mary, she gave the book (but nothing else) to John (not to others.)’

\*‘As for John, Mary (but no one else) gave the book (but nothing else) to him.

‘Mary (but no one else) gave the book (but nothing else) to John (but not to others).

The first *nun*-P may occupy TopP or FocP, but the rest cannot occupy TopP because TopP is above FocP and TopP is not recursive. In (161), the *nun*-P *cheg-un* moves over TopP, and [foc] cannot be checked in a different position from FocP.

(161) \**cheg-un*<sub>[foc, phon]</sub> [<sub>TopP</sub> *Mary-nun*<sub>[top]</sub> [<sub>FocP</sub> *John-ege-nun*<sub>[foc, phon]</sub>

[<sub>TP</sub> *pro* *cheg-un*<sub>[foc, phon]</sub> *John-ege-nun*<sub>[foc, phon]</sub> *cheg-un*<sub>[foc, phon]</sub> *juesda*]]]

\*‘As for Mary, she gave the book (but nothing else) to John (not to others.)’

Since the uninterpretable feature [foc] of *cheg-un* cannot be checked in (161), the sentence is ungrammatical. In (162), [top] cannot be checked and it results in ungrammaticality in each structure.

(162) a. \* [<sub>FocP</sub> *cheg-un*<sub>[foc, phon]</sub> [<sub>FocP</sub> *Mary-nun*<sub>[top]</sub> [<sub>FocP</sub> *John-ege-nun*<sub>[foc, phon]</sub>

[<sub>TP</sub> *pro* *cheg-un*<sub>[foc, phon]</sub> *John-ege-nun*<sub>[foc, phon]</sub> *cheg-un*<sub>[foc, phon]</sub> *juesda*]]]

\*‘As for Mary, she gave the book (but nothing else) to John (not to others.)’

b. \* [<sub>FocP</sub> *cheg-un*<sub>[foc, phon]</sub> [<sub>FocP</sub> *Mary-nun*<sub>[foc, phon]</sub> [<sub>FocP</sub> *John-ege-nun*<sub>[top]</sub>

[<sub>TP</sub> *Mary-nun*<sub>[foc, phon]</sub> *pro* *cheg-un*<sub>[foc, phon]</sub> *juesda*]]]

\*‘As for John, Mary (but no one else) gave the book (but nothing else) to him.’

The *nun*-P *Mary-nun* in (162a) and *John-ege-nun* in (162b) have topic features and occupy FocPs. The uninterpretable feature [top] cannot be checked in these structures.

The following sentence is grammatical, because all the contrastive focus operator features are checked in FocPs.



(163) [<sub>FocP</sub> Mary-nun<sub>[foc, phon]</sub> [<sub>FocP</sub> cheg-un<sub>[foc, phon]</sub> [<sub>FocP</sub> John-ege-nun<sub>[foc, phon]</sub>

[<sub>TP</sub> Mary-nun<sub>[foc, phon]</sub> cheg-un<sub>[foc, phon]</sub> John-ege-nun<sub>[foc, phon]</sub> cheg-un<sub>[foc, phon]</sub>

juesda]]]]

‘Mary (but no one else) gave the book (but nothing else) to John (but to no one else.)’

This shows that the topic nun-P merges in TopP, which is above FocPs, and contrastive focus nun-Ps move to FocPs, which can be recursive. Nun-Ps may receive topic readings or contrastive focus readings in given contexts, and the readings correlate with the positions nun-Ps occupy in a sentence. The nun-Ps in other positions than the leftmost position of a clause cannot be the topic because only merged nun-Ps in TopP are topics, and TopP occupies the leftmost position in the left periphery.

## Chapter 7: Acquisition Data

This chapter reports preliminary research on the acquisition of topic *nun*-Ps and contrastive focus *nun*-Ps using acquisition data from children to assess the acquisitional differences or similarities between derivationally different structures of *nun*-Ps. In previous chapters, I argued that topics and contrastive foci have structurally different properties since topic phrases and contrastive focus phrases undergo different derivational processes: topics merge in TopP and contrastive foci move to FocP. I discussed the derivational differences between topic *nun*-Ps and contrastive focus *nun*-Ps in previous chapters using adult data. In this chapter, I examine language data from children to explore the acquisitional difference between topic *nun*-Ps and contrastive focus *nun*-Ps, assuming that derivational differences between topic and contrastive focus may result in developmental differences between topic and contrastive focus in child language.

In order to see the difference or similarity between topic *nun*-Ps and contrastive focus *nun*-Ps during language acquisition, I will compare topic *nun*-Ps and contrastive focus *nun*-Ps in data from developing children. Brown (1973) observed that English-speaking children who are about two to three years old engage in two- to three-word sentences and add grammatical morphemes incrementally to language structures. The acquisition of morphemes follows a certain order, and sentence structure becomes more complex as children acquire the language. I chose two- to three-year-old Korean children as participants in order to see the acquisition order of topic *nun*-Ps and contrastive focus

*nun*-Ps. If the acquisition of topic *nun*-Ps and contrastive focus *nun*-Ps occurs in a sequential order in the children's data, it may be evidence of the derivational and structural differences between topic *nun*-Ps and contrastive focus *nun*-Ps.

## 7.1 Goal, Subjects, and Methodology

In this study, I will examine the order of acquisition of topic *nun*-Ps and contrastive focus *nun*-Ps. In order to observe the initial state of language development, I collected children's spontaneous production data. Children between the ages of 2 and 3 generally show rapid grammatical development in language acquisition (Demuth 1996). This study concerns the development of grammatical morphology, so I chose 2-year-old children as participants: a female child YN and a male child SB.<sup>31</sup>

YN was born in Korea and has been raised there. Both parents are Korean, and she has not been to other countries. YN's data was audio-recorded by her mother, at least one hour per month for 12 months. The recording started when YN was 1;8 and ended at 2;9.<sup>32</sup> All recordings of YN are of natural communications among YN, YN's mother, and YN's brother. There were no special settings for the recording sessions.

SB was born in the US and has been raised there. Both parents are Korean and speak to SB only in Korean. SB has spent at least two months in Korea every year. I visited SB's home and recorded his verbal production with his mother once a month for

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<sup>31</sup> In order to protect the privacy of the informants, I use the children's initials.

<sup>32</sup> 1;8 means 1 year 8 months old.

12 months. I started audio-recording when SB was 2;0 and ended at 2;11. During the recording sessions, SB's mother and I interacted with him. We tried to lead SB to speak spontaneously, asking him about what he was interested in: what he did in his daycare center, what he read, what he had, and what he was playing with. There were no special settings for the recording sessions.<sup>33</sup>

In transcribing and coding the data, all topic phrases, focus phrases, subjects, and objects were analyzed. I excluded unintelligible utterances and all repetitions of immediately preceding utterances from the child's own speech or from the speech of others. The reliability of the transcriptions was assessed on 8.3% of the data for each child by a trained coder of Korean. The percentage of agreement between the coder and the researcher was 93%.

For the coding decision between topic *nun*-Ps and contrastive focus *nun*-Ps, I looked for other entities that were compared with the *nun*-Ps in the given context. As discussed in Chapter 2, topic *nun*-Ps are not contrastive, so they do not require other entities to make them contrastive. On the other hand, contrastive focus *nun*-Ps require other entities to be compared with the *nun*-Ps and to make the *nun*-Ps contrastive. In the following data, YN starts to talk about 'this,' changing the topic. There is no other entity to be compared with the *nun*-P:

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<sup>33</sup> This research was approved by the Institutional Review Board (IRB protocol number: 2007-06-0079).

(164) MOM: uh, YN josim-he!

careful-do

‘Uh, YN, be careful!’

YN: igu-nun mwu-ya?

this-NUN what-is

‘As for this, what is it?’ [TOPIC]

MOM: kare. YN-do kare-e bibyuj-ulge.

curry YN-also curry-with mix-will

‘Curry. I will mix steamed rice with curry for you, too.’

In this context, *igu-nun* is the topic of the sentence, and it is not contrastive. Therefore, I tagged the *nun*-P with ‘topic.’

Contrastive focus *nun*-Ps are contrasted with other entities in the linguistic context:

(165) (Mom is reading a book)

MOM: anja-is-go gune-lul ta-go

sitting-is-and swing-ACC ride-and

‘(She/he/they) are sitting and swinging...’

YN: uhuh, YN-nun an ta.

YN-NUN not ride

‘Uh uh, YN doesn’t swing.’ [CONTRASTIVE FOCUS]

YN contrasts herself with someone in the book, using *nun*-P. The referent in the book is another entity, which is compared to and contrasted with YN. Therefore, I tagged the *nun*-P with ‘contrastive focus.’ There are several *nun*-Ps that were hard to classify as a topic phrase or as a focus phrase. In those cases, I did not count the *nun*-Ps.

In analyzing the data, I compared four categories: nominatively-marked phrases (*ga*-Ps), accusatively-marked phrases (*lul*-Ps), topic *nun*-Ps, and contrastive focus *nun*-Ps. I indicated which grammatical role each marked phrase had: specifically, subject, object, and non-argument. In Korean, the nominative markers are *-i* and *-ga*, and *-i* follows a consonant and *-ga* follows a vowel. Accusative markers are *-ul*, which follows a consonant, and *-lul*, which follows a vowel. In this research, *ga*-P refers to a nominatively-marked phrase, and *lul*-P refers to an accusatively-marked phrase.

I also separated non-marked phrases, which occur before the first utterances of each category, from marked phrases and non-marked phrases that occurred after the first occurrence of each category. Non-marked phrases are grammatical in Korean if they keep the typical word order in a sentence: SOV. To assign unmarked phrases to the four categories, nominatively-marked phrases, accusatively-marked phrases, topic-marked phrases, and contrastive-focus-marked phrases, I tried to add each marker to an unmarked phrase and chose the marker that makes the meaning of the phrase the most natural in the given context. If there is more than one marker required to make the phrase natural, I did not count it for any category. In the following dialogue, for example, the topic marker *-nun* can be attached to the first phrase *appa* ‘dad,’ and the other markers make the

dialogue unnatural. The second *appa* is natural if the subject marker *-ga* is attached, but the other makers make it unnatural.

(166) YN: (Starting the conversation)

a. **appa** unje wassu? **appa** wane.

dad when came dad came

‘As for dad, when did he come? Dad came.’

b. **appa-nun** unje wassu? appa wane.

**dad-NUN** when came dad came

‘As for dad, when did he come? Dad came.’

c. **#appa-ga** unje wassu? appa wane.

**dad-NOM** when came dad came

‘When did dad come? Dad came.’

d. **\*appa-lul** unje wassu? appa wane.

**dad-ACC** when came dad came

e. appa unje wassu? **appa-ga** wane.

dad when came **dad-NOM** came

‘As for dad, when did he come? Dad came.’

f. **#appa** unje wassu? **appa-nun** wane.

dad when came **dad-NUN** came

‘As for dad, when did he come? Dad came (but no one else came).’

g. \*appa unje wassu? **appa-lul** wane.

dad when came **dad-ACC** came

MOM: appa wasne? udi-ssu?

dad came where-is

‘Dad came? Where is he?’

Since the phrase *appa* is interpreted naturally only with *–nun* and the *nun*-P *appa-nun* is interpreted as the topic of this conversation, I categorized the first *appa* as the topic. The second *appa* is interpreted naturally only with the subject marker *–ga*, so I categorized it as a nominative phrase. I will present statistical analyses for these grammatically marked/unmarked phrases’ chronological order in order to determine the sequential order of topic *nun*-Ps and contrastive focus *nun*-Ps.

## 7.2 Developmental Order of Grammatical Markers and Word Order

In this section, I review previous studies on the acquisition of Korean case markers and *–nun* and on the word order tendencies in children’s data. In longitudinal data from four children who were 1- to 3-years old, Chung (1994) found that the developmental order of case markers was consistent in all four children’s data: nominative markers were acquired earlier than accusative markers. Nominative markers appeared between 1;7 and 2;0, and accusative markers appeared five months later than nominative markers. Cho (1982) reported a similar result, that the nominative marker appeared as early as 1;7 and as late



as 1;11. The accusative marker appeared four or five months after the first appearance of the nominative marker.

Chung (1994:58) observed that the topic marker *-nun* was rarely produced even after children started using the nominative marker *-ga* frequently. Though she did not report on the acquisition order of *-nun* and the accusative markers, she mentioned, ‘The children acquired *-nun* as a topic marker first, then as a contrastive marker’ (Chung 1994:76). Kim (1997) also observed that Korean children start to produce the nominative marker *-ga* between 1;8 and 2;0, and *-nun* is produced several months later. The accusative marker *-lul* is used later than *-ga* and *-nun*: it is first used near 3;0 (Kim 1997). Zoh (1981) reported that *-nun* is acquired later than *-ga*. Previous language acquisition studies have not separately examined the topic *nun*-P structure and the contrastive focus *nun*-P structure.

The accusative marker is dropped much more often than the nominative marker in both children’s speech and adults’ speech (Cho 1981, Kim 1997). Lee and Pae (1989) found that the nominative marker had been acquired by 3-year-olds and the accusative marker by 4-year-olds in their experimental study of 2- to 7-year-old children.

As discussed in the previous chapters, Korean is an SOV language with relatively free word order. Verbs usually occur at the rightmost position in sentences, but the other grammatical categories may scramble. This relative freedom of word order may be related to markers that indicate the grammatical roles of constituents (Kim 1997). In analyzing Korean children’s data, Chung (1994) argued that ‘nominative-accusative case-marking is acquired on the basis of position in the basic word order (SOV)’ in Korean.

In a study of word orders in Korean, Cho (1981) analyzed spontaneous speech data from three Korean children who were 2 to 3 years old and monolingual, and she found that children predominantly produced the canonical word order. The percentages of canonical word order utterances for each child were 81.3%, 90%, and 93.3%. Zoh (1981) also reported that a fixed word order was exhibited in Korean-speaking children's early utterances. The results indicate that Korean children tend to adhere to the canonical SOV word order in the early stages of acquisition.

It has been observed that, in the acquisition of other languages, word order at the initial stage is also fixed. Brown, Cazden, and Bellugi-Klima (1970) note that the word order of the English-acquiring children they observed was correct with respect to the order of articles, adjectives, auxiliaries, adverbs, and all other words. Russian allows relatively free word order, and Slobin (1966) observed that a Russian-speaking child preserved a more rigid subject-object order than adults until she acquired the accusative inflection. Slobin and Bever (1982) examined the sensitivity to canonical sentence form and to word order and perceptual strategies for inflection in monolingual children aged 2;0 to 4;4 who were speakers of English, Italian, Serbo-Croatian, or Turkish. They observe that the acquisition of inflection can influence the word-order strategy application.

A word-order strategy is used by children for marking grammatical relations (Clancy 1985). She observed in her Japanese acquisition data that when the object marker was acquired, children relaxed their reliance on the word-order strategy. Her observation is compatible with Boškovič's (2004) generalization that languages with Japanese-style

(also Korean-style) scrambling always have an overt case marking system. With monolingual Korean children, Kang (2005) tests an acquisitional ordering effect predicted from Bošković's generalization. She observes that, when acquiring a language with Japanese-style scrambling, children acquire overt case marking before or concurrently with scrambling but not significantly later than scrambling.

These findings point out something similar: scrambling occurs later than grammatically marked phrases in child language. In the next section, I will analyze the order in which merged *nun*-Ps and scrambled *nun*-Ps are acquired in Korean.

### 7.3 The Acquisition Order of the Topic *Nun*-Ps, Contrastive Focus *Nun*-Ps, and Other Grammatically Marked Phrases

In the data, grammatical markers appeared sometime later than the onset of data collection. Before the first appearance of markers, subjects, objects, topic phrases, and contrastive focus phrases were used without markers or they were omitted. The following examples are from YN's data, and they show that subjects, objects, topic phrases, and contrastive focus phrases were used unmarked before their first appearance:

(167) a. Unmarked subject (YN - 1;10)

umma, aisi            **aisi**            honne?

mom    gentleman gentleman scold

‘Mom, a gentleman, a gentleman scolds (me)?’

b. Unmarked object (YN – 1;10)

**kaka** jwu, **kaka** jwu!

snack give snack give

‘Give me snack, give me snack!’

c. Unmarked topic phrase (YN - 2;0)

YN: (Starting the conversation)

**appa** unje wassu? appa wane.

dad when came dad came

‘As for dad, when did he come? Dad came.’

MOM: appa wasne? udi-ssu?

dad came where-is

‘Dad came? Where is he?’

d. Unmarked contrastive focus phrase (YN - 2;0)

MOM: tudu-myun pi na.

tear-when blood come-out

‘when (you) tear it off, it will bleed.’

YN: **jiun** ani-ya.

now not-is

‘It is not bleeding now.’

MOM: jigum-un an na-nunde, najoonge nal sooissu. guchi?

now-NUN not come-but later come may right

‘Now, (it) doesn’t bleed, but (it) may bleed later, right?’

SB's data show a similar tendency. Until markers appeared first, the phrases were used without markers. See the examples in (168):

(168) a. Unmarked subject (SB - 2;0)

**umma** inoomhaji.

Mom scold

‘Mom will scold (me).’

b. Unmarked object (SB - 2;5)

**sagwa** mugu.

apple eat

‘(I) am eating an apple.’

c. Unmarked topic phrase (SB - 2:3)

R(ESEARCHER)<sup>34</sup>: *dolgore? dolgore udissu?*

*dolphin dolphin where-is*

‘Dolphin? Where is a dolphin?’

SB: *yugi.*

*here*

R: *yugi udi? yugi-ga udi-ya?*

*here where this<sub>NOM</sub> where-is*

‘Where here? Where is this?’

---

<sup>34</sup> I will use ‘R’ for ‘Researcher’ to make the examples easy to read.

SB: **dolgore** yugisjana.

dolphin here-is

‘A dolphin is here.’

In both data sets, the nominative marker appeared first among the markers that are discussed here. The first nominative marker appeared when YN was 2;1 (five months after the first recording) and when SB was 2;0 (in the first month of recording).

(169) Nominative marker

a. (YN – 2;1)

**YN-ga** ha-n gu-ya.

YN<sub>NOM</sub> did-that thing-is

‘It is what I did.’

b. (SB – 2;0)

aya, **roboch-i** ayahetu-yo.

Ouch robot<sub>NOM</sub> ouch-did<sub>HON</sub>

‘Ouch, the robot was hurt.’

In YN’s data, the nominative marker and topic *nun*-Ps appeared in the same month, when she was 2;1, whereas SB started to use topic *nun*-Ps seven months later than the nominative marker.

(170) Topic *nun*-P

a. (YN – 2;1)

MOM: jaa...

well

YN: ---- **igu-nun** bus-ul-ka?<sup>35</sup>

this-NUN put-off-will-PART

‘---- as for this, shall I put it off?’

MOM: ani ani ani.

no no no

b. (SB – 2;7)

R: ig-e mwu-ya?

this-NOM what-is

‘What is this?’

SB: igu?

this

‘This?’

R: ung.

yes

SB: igu, **igu-nun** hetpo-iya.

this this-NUN cell-phone-is

‘This, as for this, it is a cell phone.’

---

<sup>35</sup> If I could not understand the children’s utterance, I added ‘----’ for the unintelligible parts.

Examples (170 a & b) include the topic *nun*-P that appeared first in each data set. Both children produced *igu-nun* ‘as for this’ as their first *nun*-P. *Igu-nun* appeared often in both data sets.

In both YN’s and SB’s data, topic *nun*-Ps occurred about 2 months earlier than focus *nun*-Ps. Topic *nun*-Ps often referred to subjects in both data sets, but they also referred to objects or non-arguments.

(171) Topic *nun*-Ps referring to subjects

a. (YN – 2;6)

YN: we i-chok gil-lo ga? noogoo ta? halmuni ta? gachi ta?  
why this-way street-on go who ride grandma ride together ride  
‘Why are we going on this street? Who will ride our car? Is grandma  
going to ride our car? Is she going to ride our car together with us?’

MOM: ung.

yes

YN: **halmuni-nun** gach ta?

grandma<sub>NUN</sub> together get-on

‘As for grandma, is she going to get on this together with us?’

b. (SB – 2;8)

R: halmuni udi gyeshu?

grandma where is

‘Where is your grandma?’



SB: jib-e.      **halmui-un** jib-e      issu.

home-at grandma-NUN home-at is

‘Home. As for Grandma, she is home.’

In (171a), YN is asking about her grandma, and SB in (171b) is talking about his grandma. The topic *nun*-Ps refer to the subject of each sentence. The subjects are omitted because of redundancy, as I discussed in Chapters 4 and 6.

A topic *nun*-P which referred to an object appeared only two times in each data set.

(172) Topic *nun*-Ps referring to objects

a. (YN – 2;8)

ung. **igu-nun, igu-nun**, bwa. suguss-u, an suguss-u?

ok this-NUN this-NUN see rotten-is not rotten-is

‘Ok. As for this, as for this, see it. Is it rotten or not?’

b. (SB – 2;9)

**igu-n** noo-ga sajwussu-yo?

this-NUN who-NOM bought-HON

‘As for this, who bought it?’

In both examples, the topic *nun*-P refers to the object of the following clause.

Topic *nun*-Ps also referred to non-arguments:

(173) Topic *nun*-Ps referring to non-arguments

a. (YN – 2;7)

umma, **onul-un** bi wa, an bi wa? ung?

mom today-NUN rain come not rain come huh

‘Mom, as for today, does it rain, or doesn’t it rain? Huh?’

b. (SB – 2;9)

**gu-gos-e-nun** santaharabuji-ga sungbui suissu-yu.

that-place-at-NUN Santa-Claus-NOM ----- stood-HON

‘At the place, Santa Claus stood -----.’

In (173a), the topic is *onul* ‘today,’ which is merged with the following clause. The adverbial phrase *gu gose-nun* ‘at that place’ is the topic of (173b). Both *nun*-Ps are non-arguments in those sentences.

Contrastive focus *nun*-Ps appeared less often and later than topic *nun*-Ps in both data sets:

(174) Contrastive focus *nun*-Ps referring to subjects

a. (YN – 2;4)

(Mom is reading a book)

MOM: anja-is-go, gune-lul ta-go...

sitting-is-and swing-ACC ride-and

‘They are sitting and swinging...’

YN: uhuh, **YN-nun** an ta.

YN<sub>-NUN</sub> not ride

‘Uh uh, YN doesn’t swing.’

b. (YN – 2;6)

(YN is singing)

YN: umuni-wa abuji-wa salasj-yo. **abuji-nun** namoo hasi-go, **amuni-nun**

mother-with father-with lived<sub>-HON</sub> father<sub>-NUN</sub> tree do-and mather<sub>-NUN</sub>

san sisussu-yo.

---- washed<sub>-HON</sub>

‘Mother and father lived. FATHER cut firewood, and MOTHER washed ---.’

c. (SB – 2;9)

MOM: gugu-nun moosun sekkal-inde? igu-nun moosun sekkal-inde?

that<sub>-NUN</sub> which color-is this<sub>-NUN</sub> which color-is

‘As for that, which color is it? As for this, which color is it?’

SB: orenji sekkal-ijana.

orange color-is

‘(As for that,) it is an orange color.’

MOM: ig-e orenji sekkal-iyā?

this<sub>-NOM</sub> orange color-is

‘Is this an orange color?’

SB: **igu-n** palgan sek.

this-<sub>NUN</sub> red color

‘THIS (is) a red color.’

In (174a), YN contrasts herself with someone in the book that her mom is reading, using the contrastive focus *nun*-P. She contrasts the father and the mother in (174b), describing different activities that the father and the mother conducted. In (174c), *igun* is contrasted with something orange. Each *nun*-P refers to the subject of the following clause.

Whereas YN’s use of contrastive focus *nun*-Ps referred only to subjects, two of SB’s contrastive focus *nun*-Ps referred to objects:

(175) Contrastive focus *nun*-P referring to an object (SB 2;10)

**gicha-nun** a-ta-goo-yu, monoreil-man tassu-yo.

train-<sub>NUN</sub> not-get-on-and-<sub>HON</sub> monorail-only got-on-<sub>HON</sub>

‘TRAIN, I didn’t get on it, and I got on a monorail only.’

SB contrasts the train with the monorail, repeating the *nun*-P *gicha-nun*. Neither data set included contrastive focus *nun*-Ps that referred to non-arguments.

*Ga*-Ps, that is, nominatively marked phrases, occur before *nun*-Ps or at the same age, as some researchers have already pointed out (see 7.2). *Lul*-Ps, accusatively marked phrases, do not occur often, but these are not used often even in casual adult conversation. In other words, without accusative markers, all the objects are unmarked and acceptable.

Surprisingly, none of the grammatical markers occur in incorrect positions, even though the markers are often omitted. *Wh*-movement is not obvious. Arguments are often omitted, and it is not clear that *wh*-phrases undergo movement without comparing the positions of other arguments.

In YN's data, *ga*-Ps and topic *nun*-Ps first occur in the same month (2;1), followed by contrastive focus *nun*-Ps two months later (2;3). A *lul*-P occurs only once in YN's data, and it is later than the other marked phrases (2;4). After the first occurrence of a topic *nun*-P and a contrastive focus *nun*-P, the markers were not often omitted; rather, both markers were used correctly. As shown in Table 1 below, 81% of topic phrases and 100% of contrastive focus phrases were marked overtly with markers after the first occurrence of the pertinent use of the marker *-nun*. Topic *nun*-Ps mainly referred to subjects (38%), but they also referred to objects (7%) and non-arguments (14%). All the contrastive focus *nun*-Ps referred to subjects (100%). On the other hand, the nominative marker and the accusative marker were often omitted, especially the accusative marker, which appeared only once in YN's data. Just 42% of nominative phrases and 8% of accusative phrases were marked overtly with markers after the first occurrence of each.

The order in which grammatically marked phrases appeared in SB's data is somewhat different from YB's; see Table 3. In SB's data, *ga*-Ps occur seven months earlier (2;0) than topic *nun*-Ps (2;7), which in turn were followed by *lul*-Ps (2;8). Contrastive focus *nun*-Ps occurred two months later than topic *nun*-Ps (2;9). SB's data also show that *-nun* was rarely omitted after the first occurrence of each: 75% of topic phrases and 86% of contrastive focus phrases were marked overtly with markers after the

first occurrence of each marker. As shown in Table 4, topic *nun*-Ps mainly referred to subjects (78%), but they also referred to objects (9%) and non-arguments (4%).

Contrastive focus *nun*-Ps referred to subjects (67%) and objects (33%). None of the contrastive focus *nun*-Ps in SB's data referred to non-arguments.

SB did not omit the nominative marker often; 68% of nominative phrases were marked overtly with markers after the first occurrence of that marker. The accusative marker appeared only two times, and it was mainly omitted.

Table 1. YN (1;8 – 2;9)

*Use of four phrase types before and after the first occurrence of the relevant particle. For the period after the first production of the particle, the percentage of marked phrases is inserted.*<sup>36</sup>

	Age at first occurrence of particle (Y;M)	Before	After
		Frequency of non-marked phrases	Frequency of marked phrases
Topic <i>nun</i> -P	2;1	7	30 (81)
Focus <i>nun</i> -P	2;3	4	15 (100)
<i>Ga</i> -P (Subject)	2;1	5	26 (42)
<i>Lul</i> -P (Object)	2;4	45	1 (8)

<sup>36</sup> In the following tables, all percentages are put in parentheses.

Table 2. Marked *nun*-Ps in YN's data (YN 2;1 - 2;9)

	Referring to subject	Referring to object	Non-argument
Topic <i>nun</i> -P	11 (38)	2 (7)	4 (14)
Focus <i>nun</i> -P	15 (100)	0	0

Table 3. SB (2;0 – 2;11)

	Age at first occurrence of particle (Y;M)	Before	After
		Frequency of non-marked phrases	Frequency of marked phrases
Topic <i>nun</i> -P	2;7	3	21 (75)
Focus <i>nun</i> -P	2;9	0	6 (86)
<i>Ga</i> -P (Subject)	2;0	2	32 (68)
<i>Lul</i> -P (Object)	2;8	12	2 (11)

Table 4. Marked *nun*-Ps in SB's Data (SB 2;7 - 2;11)

	Referring to subject	Referring to object	Non-argument
Topic <i>nun</i> -P	18 (78)	2 (9)	1 (4)
Focus <i>nun</i> -P	4 (67)	2 (33)	0

The acquisition order of grammatically marked phrases is represented by the following:

(176) The acquisition order of grammatically marked phrases

a. YN: *-ga* (NOM) / *-nun* (TOP) → *-nun* (FOC) → *-lul* (ACC)

b. SB : *-ga* (NOM) → *-nun* (TOP) → *-lul* (ACC) → *-nun* (FOC)

In both data sets, topic *nun*-Ps occur earlier than contrastive focus *nun*-Ps; thus, merged *nun*-Ps occur before moved *nun*-Ps in the acquisition data. Given the sparse usage of the accusative marker, which emerges only three times in the children's data, it is observed that topic *nun*-Ps emerge before contrastive focus *nun*-Ps in both data sets. This shows the difference between topic *nun*-Ps and contrastive focus *nun*-Ps.

#### 7.4 Maternal Input

In language acquisition research, researchers have discussed how maternal speech is related to children's language acquisition. Based on two mothers' speech, Chung (1994) reported that the canonical word order was preferred in both the children's speech and the mothers' speech. She argued that the children's word-order usage was significantly related to their mothers' speech. Cho (1982) also proposed strong correlations between maternal input and children's acquisition of word-order patterns. Chung showed that the accusative marker was omitted much more frequently than the nominative marker in maternal input, and children's data showed the same tendency.

It can be assumed that maternal input in the mother-child context includes a specific grammatical structure encountered more frequently than structures in other



contexts, and the frequency may have an influence on the acquisition of the grammatical structure. In my preliminary research, I compared the frequency of each marker in maternal speech with the frequency in the children's speech in order to see the possible influence of maternal input on the children's utterances.

YN's data were recorded by her mother. The main speakers were YN's mother and YN, and YN's brother participated in a few conversations. I excluded YN's brother's speech when comparing maternal speech and YN's speech. The statistics are in Table 5.

Table 5. Frequency of markers in YN's speech and in maternal speech

	Before the first occurrence			After the first occurrence			
	YN	Mother		YN		Mother	
	Non-marked phrases	Non-marked phrases	Marked phrases	Non-marked phrases	Marked phrases	Non-marked phrases	Marked phrases
Topic <i>nun</i> -P	7	1	7 (88)	7	30 (81)	5	24 (83)
Focus <i>nun</i> -P	4	0	8 (100)	0	15 (100)	0	6 (100)
<i>Ga</i> -P (Subject)	5	14	16 (53)	36	26 (42)	25	21 (46)
<i>Lul</i> -P (Object)	45	48	12 (20)	11	1 (8)	3	1 (25)

In Table 5, there is no evident difference between the percentage of YN's marked phrases and the percentage of her mother's marked phrases after YN's first usage of each marker. In YN's speech, 81% of topic phrases appeared with the marker *-nun*, and this is almost the same as the percentage in maternal speech (83%). The frequency of marked

contrastive focus *nun*-Ps is the same in YN's speech and maternal speech (100%). The frequency of the nominative marker and the accusative marker show the same tendency: the percentage of *ga*-Ps is 42% in YN's speech and 46% in maternal speech, and the percentage of *lul*-Ps is 8% and 25% each. Considering that a marked *lul*-P appeared only once in the speech of each individual, the frequency of marked *lul*-Ps is the same in YN's speech and maternal speech.

There is little or no difference between the percentage usage of marked phrases in the child's speech and in her mother's speech. The statistics of marked phrases in maternal speech and children's speech may indicate the influence of maternal input on children's language acquisition.

## 7.5 Discussion and Further Directions

This preliminary research shows that merged topic phrases occur earlier than moved focus phrases in children's language data. The acquisition order of topic *nun*-Ps and contrastive focus *nun*-Ps may be empirical evidence of the derivational and structural differences between topic *nun*-Ps and contrastive focus *nun*-Ps in children's language:

- (177) a. [<sub>TopP</sub> *nun*-P<sub>[top]</sub> [<sub>TP</sub> ... *pro* ... ]]
- b. [<sub>FocP</sub> *nun*-P<sub>[foc, phon]</sub> [<sub>TP</sub> ... *nun*-P<sub>[foc, ~~phon~~]</sub> ... ]]
- [<sub>FocP</sub> *nun*-P<sub>[foc, ~~phon~~]</sub> [<sub>TP</sub> ... *nun*-P<sub>[foc, phon]</sub> ... ]]

Merge and Move are different derivational processes, and the landing sites of topic *nun*-Ps and contrastive focus *nun*-Ps are different. These grammatical differences may influence the acquisition of topic *nun*-Ps and contrastive focus *nun*-Ps. Moreover, semantic and discourse features and maternal input may also influence children's language acquisition, resulting in the acquisitional order of *nun*-Ps. In this section, I will discuss the factors that could result in the apparent acquisitional differences between topic *nun*-Ps and contrastive focus *nun*-Ps.

### **7.5.1 Grammatical Factors in the Acquisition of *nun*-Ps**

In order to provide strong support for the acquisitional differences between topic *nun*-Ps and contrastive focus *nun*-Ps, prerequisites for the derivations of *nun*-Ps must be considered in the children's language. In the left periphery of the adult grammar, topics merge in TopP and contrastive foci move to FocP. In the children's language, also, there should be phrase structures for merging topics and moving contrastive foci. In order to merge a topic, there should be a position on the left of the subject, and to move a contrastive focus, more prerequisites are required: the landing site must exist in the sentence structure, and the relationship between the moved phrase and its copy in the base position must be recognized for co-reference.

The left periphery is projected at an early stage of language acquisition (Hyams 1992, Poeppel and Wexler 1993, Stromswold 1990, Verrips and Weissenborn 1992). Poeppel and Wexler's quantitative analyses showed that head movement from V to I to C

and properties forcing a constituent to move into Spec, CP were observed in natural production data from a twenty-five-month-old German child. Considering the structure of the left periphery in child language, Hollebrandse and Roeper (1998) and Roeper and Villiers (2011) assume that children begin with a ‘proto-CP’ and refine the structure of the left periphery when they receive new information. During the acquisition of merging topics and moving contrastive foci, children may not utilize the fully developed structure of the left periphery, but a primitive structure, proto-CP, may be developed for topic and contrastive focus.

Assuming a proto-CP in child language, the acquisitional differences between topic *nun*-Ps and contrastive focus *nun*-Ps may result from the derivational differences: topic *nun*-Ps do not undergo movement, but contrastive focus *nun*-Ps move. Movement is a complicated process related to copying and variable-binding, as shown in Chapters 5 and 6. Children must be aware of the link between a moved contrastive focus and its copy in the base position in order to interpret contrastive focus phrases. Because of the derivational and structural complexity of moved elements, children might choose derivations without movement over derivations with movement. They may put topic phrases simply in the leftmost position during the acquisition of *nun*-Ps.

Hulk (1996) observed that subject/object inversion in *wh*-questions did not occur in the early stage of French acquisition. Hulk and Zuckerman (2000) and Zuckerman (2001) argued that this was because children choose the most economical option among several structures for the same semantic and pragmatic context, and that option involves the least movement. Soares (2003, 2010) observed in European Portuguese early

acquisition data from 2- to 4-year-old children that subject/verb inversion in *wh*-questions was not found, though European Portuguese has the *WH-V-S* order in *wh*-questions. The *S-V* order was maintained, and focalizing elements were always inserted before subjects in questions. Children's preference for the least movement may be the reason topic *nun*-Ps emerge before contrastive focus *nun*-Ps in children's data.

To examine conditions for the acquisition of topic and contrastive focus, future research should draw upon more various data to specify the structure of the left periphery in child language. The moved contrastive foci and their variables must be examined syntactically. The semantic structure of topic and contrastive focus should be studied for the acquisition of topic and contrastive focus.

The leftward movement of contrastive focus *nun*-Ps may be covert, so it would be desirable if contrastive focus movement could be compared with *wh*-movement, which can be covert in Korean in acquisition data. In the small data sets reported here, it is not clear if *wh*-phrases undergo movement. If data were collected until about 4;0, there would be more results related to scrambling and *wh*-movement.

### **7.5.2 Maternal Input and the Influence on the Acquisition of Nun-Ps**

In this section, I discuss the influence of maternal input on the acquisition of *nun*-Ps. As discussed in 7.4, maternal input is closely related to children's language acquisition. I compared the frequencies of markers in YN's speech and maternal speech; the percentages are very similar: 81% of topic phrases are *nun*-marked in the child speech

and 83% in maternal speech, and 100% of contrastive focus phrases are *nun*-marked both in the child's speech and in maternal speech. When the frequency of topics and contrastive foci in *nun*-Ps are compared, some differences are observed: 30 out of 45 *nun*-Ps are topics in the child's speech, and 24 out of 30 *nun*-Ps are topics in maternal speech, that is, 67% of *nun*-Ps in the child speech and 80% of *nun*-Ps are topics in maternal speech.

Assuming that maternal speech is different from natural adult speech, I compare the frequencies of topic *nun*-Ps and contrastive focus *nun*-Ps in YN's data with spoken Korean data collected from a Korean television drama: *Guduli sanun sesang* 'The World That They Live In,' which aired in 2008. The reason I chose the drama is because it contains natural spoken Korean, representing contemporary Seoul dialect, and it only includes adult speech since all the speakers are over the age of 20. I collected the data from the first episode, which is one hour long. I transcribed the data based on the script in Noh (2009).

In the adult data, the frequency of topic *nun*-Ps out of all *nun*-Ps is 61, whereas the frequency of contrastive focus *nun*-Ps is 46: the percentage of topic *nun*-Ps and contrastive focus *nun*-Ps is 57% and 43%. On the other hand, the frequency of topic *nun*-Ps and contrastive focus *nun*-Ps in maternal data is 24 and 6: 80% vs. 20%.

Table 6. Frequencies of markers in YN's speech, maternal speech, and adult speech

	YN's speech	Maternal speech	Adult speech
Frequency of topic <i>nun</i> -Ps	30 (67)	24 (80)	61 (57)
Frequency of focus <i>nun</i> -Ps	15 (33)	6 (20)	46 (43)

Only 6 out of 30 *nun*-Ps receive contrastive focus readings in maternal input, whereas 46 out of 107 *nun*-Ps are contrastive foci in the adult-to-adult data. As shown in Table 6, the percentage of topic *nun*-Ps in the child speech is 67%, which falls between the percentage in maternal speech and that in the adult speech.

The preference for topic *nun*-Ps over contrastive focus *nun*-Ps in maternal speech may influence children's speech. Considering that the statistics concerning *nun*-Ps in adult speech are not markedly different from the statistics in the child's speech, however, it may be hypothesized that children's language has a similar structure to adult language at an early stage of language acquisition. The data set is small, so further research should be done to prove the influence of maternal speech. In further research, more specific analyses should be conducted.

### 7.5.3 Complex Discourse Features of Contrastive Focus

The discourse properties of contrastive focus may be too complicated for children to acquire contrastive focus earlier. Children can simply pick a discourse element as the

sentence topic, but for contrastive focus children must know there is at least one more element in the discourse, and the element is compared to the contrastively focused element. Assuming the complexity of discourse features in contrastive focus phrases, I looked into the acquisition order of un-marked topic phrases and un-marked contrastive focus phrases that emerged before the first occurrence of a *nun*-marked phrase in YN and SB's data. If the complexity of discourse features in contrastive focus phrases influenced the acquisition order of topic *nun*-Ps and contrastive focus *nun*-Ps, the complexity must have an influence on the acquisition order of topic phrases and contrastive focus phrases overall.

In YN's data, both an unmarked topic phrase and an unmarked contrastive focus phrase emerge at 2;0 as transcribed in (159). In SB's data, on the other hand, an unmarked topic phrase emerges at 2;3, but no unmarked contrastive focus phrase is observed before the first occurrence of the contrastive focus *nun*-P.

(178) Age at first occurrence of unmarked topic/contrastive focus phrase

	YN's speech	SB's speech
Topic	2;0	2;3
Contrastive focus	2;0	2;7

There is an age difference in the appearance of unmarked phrases in YN's data, but an unmarked topic phrase emerges before an unmarked contrastive focus phrase in SB's data.



Considering this result, the influence of the complexity of discourse features is not clearly proved, though we cannot dismiss the possible influence of the discourse because the results are based on very small data sets.

This preliminary research is suggestive with respect to the acquisition order of topic phrases and contrastive focus phrases: merged topic phrases occur earlier than moved contrastive focus phrases. The next step for further research on the acquisition of topic and contrastive focus must be to collect more data from more informants and participants in various discourse settings for a longer period of time, using various methods.

## Chapter 8: Conclusion and Future Directions

In this dissertation, I have argued that topic and contrastive focus are structurally different and undergo different derivational processes, and I have provided acquisition data from two children to support this claim. Topic phrases merge in TopP, checking the topic feature, and contrastive focus phrases move to FocP, checking the focus operator feature in Korean, a free word-order and pro-drop language. The structural difference between merged topic and moved contrastive focus in Korean is compatible with the difference in fixed word-order languages, such as Italian and Hungarian. In these languages, topics are dislocated in TopP and co-refer to a pronoun in the clause, and contrastive foci move to FocP and leave a copy in the base position.

This study also supports the observation that TopP is above FocP in the left periphery, as argued in previous research. Syntactic approaches to topic and contrastive focus provide a cartography of the left periphery in which TopP is projected above FocP, mainly based on fixed word-order languages such as Italian and Hungarian. This study shows the difference in the positioning of topics and contrastive foci in Korean, which is a free word-order language. TopP is projected above FocP and TopP is not recursive in Korean, and the functional projections for topic and contrastive focus in the left periphery in Korean are compatible with those in fixed word-order languages.

As a first approach to the structural and acquisitional differences between morphologically derived topic phrases and contrastive focus phrases in a free word-order and pro-drop language, this study shows that in Korean, a free word-order language,

topics merge in TopP, and contrastive foci move to FocP, which is consistent with previous findings in fixed word-order languages. As in fixed word-order languages, in Korean a topic phrase may be left-dislocated and have a co-referring pronoun in an argument position.

Since free word-order languages do not have obvious A'-movement, such as *wh*-movement in fixed word-order languages, approaches to topic and contrastive focus in free word-order languages have focused on semantic and discourse features. In particular, prosody has been a main topic in research on topic and contrastive focus because topics do not have a strong accent while contrastive foci usually do. Some approaches deal with phonetic features, discourse features, and syntactic features in the same way, suggesting that these features are checked consistently in Spec-Head agreement. However, many languages do not have specific focal accents on foci, and synthesized voices from many electronic products do not have any prosody or accent, yet they are comprehensible. Moreover, readings of topics and contrastive foci can be various, considering possible discourse factors. In order to understand the nature of topic and contrastive focus, structural approaches are crucial. Above all, sentence-level approaches to topic and contrastive focus are essential to developing the base for drawing a picture of topic and contrastive focus structure in human languages, and this study provides a cartography of the sentence topic and contrastive focus structure.

The binary distinction between merged topics and moved foci in this study is compatible with semantic and pragmatic approaches to topic and focus, which concentrate on the semantic and pragmatic properties of topic and focus. The semantic

and pragmatic differences between topic and focus have been discussed since the distinction between theme and rheme was suggested, and research on topic and focus has been consistently looking for their different properties. This study provides the distinctive properties of topic and contrastive focus in the sentence structure, supporting the research in semantic and pragmatic areas.

Moreover, this study supplies empirical data from children's language, which shows acquisitional differences between topic and contrastive focus. The acquisition data from two children's language support my claim that topics merge and contrastive foci move in Korean by exhibiting a developmental difference between the acquisition of topic and contrastive focus. In the Korean acquisition data from two-year-old children, whose language was recorded at least once a month for one year, topic phrases emerged before contrastive foci, showing the developmental difference between merged topics and moved contrastive foci at an early stage of language acquisition. This shows the possibility that the acquisition of the structures of topic and contrastive focus is influenced by derivational and structural differences between topics and contrastive foci.

The acquisition order of topic and contrastive focus supports the observation that topic and contrastive focus are structurally different. The distinctiveness in the acquisition of topic and contrastive focus is compatible with syntactic, semantic, and pragmatic approaches to topic and focus. The acquisitional approach supports my claim that topic and focus are systematically different in human languages: topics merge but foci may move, although further research is necessary.

This study raises several issues for future studies. One of them is whether there are semantic differences in contrastive foci in different sentence positions:

(179) a. John-i Mary-ege youngu-nun garucheosda

John-NOM Mary-DAT English-NUN taught

b. John-i youngu-nun Mary-ege *t* garucheosda

John-NOM English-NUN Mary-DAT taught

‘John taught Mary English (but I don’t know anything else).’

In (179a), the contrastive focus *nun*-P *youngu-nun* is in the base position, and the *nun*-P scrambles to the left of the indirect object in (179b). Saito (2003, 2005, 2010) argues that scrambling is a vacuous movement that does not change the semantic properties of the sentence, based on his examination of contrastive focus phrases in Japanese. He asserts that scrambled contrastive foci do not result in different readings from the contrastive focus phrases *in situ*. However, two of five Korean native speakers whom I asked to judge these sentences say that (179b) may receive more readings than (179a), such as ‘John taught English to Mary(, Math to Bill, and History to Jane).’ Because of disagreement among informants, I do not pursue the issue in this study. More semantic research should be done on the semantic properties of scrambled contrastive focus phrases.

The structure of the topic projection and the contrastive focus projection is suggested in this study on the basis of free word-order language data, in which movement

to FocP is optional. There should be more syntactic approaches to topic and contrastive focus in free word-order languages in order to specify the structure of the left periphery since syntactic approaches to the left periphery have dealt mainly with fixed word-order languages. Moreover, pro-drop languages drop topics often if the meaning is supplied by the discourse. Null topics should be examined not only discursively but syntactically to see their structural properties in the left periphery.

This study is a preliminary approach to the acquisition of topic and contrastive focus. In future studies, the structure of the left periphery in child language and the acquisition of the co-relationship between moved foci and their copies in base positions should be specified. Furthermore, research should be done on how children connect the semantic properties of topic and contrastive focus with the derivational process in language acquisition.

There must be abundant data to see the differences and similarities between the acquisition of topic and contrastive focus in an early stage of language acquisition. *Wh*-phrases must be examined in acquisition data from free word-order languages since *wh*-phrases do not have the same syntactic properties in free word-order languages as in fixed word-order languages. Observing scrambling and *wh*-movement together in acquisition data, it may be possible to analyze the specific relationship between movement and focus.

In approaches to the acquisition of topic and contrastive focus, maternal input should be examined to see the influence of the input frequency of certain data on the processes of grammar acquisition. This study is an introduction to topic and contrastive

focus acquisition. More studies should be done to specify the properties of topic and contrastive focus in language acquisition.

With this analysis of the structural difference between topic phrases and contrastive focus phrases, we can see that the left periphery is the area where structural units are closely tied to discourse units. The left periphery is wide open to further research.

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